

Access DB# 861118**SEARCH REQUEST FORM**

Scientific and Technical Information Center

Requester's Full Name: M. HALPERN Examiner #: 17461 Date: 11/20/02
 Art Unit: 1731 Phone Number 305-4522 Serial Number: 091933408
 Mail Box and Bldg/Room Location: CP3-6A03 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: FIBROUS SHEET BINDERSInventors (please provide full names): KEHRER

Earliest Priority Filing Date: _____

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search for polymer binder as disclosed in claims (1) (14) (15) + (16).
 Claims are attached.

Thanks

Mark Halpern

(tried to print out the closest art first)

STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>CH</u>	NA Sequence (#) _____	STN <u>154.00</u>
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) <u>(4)</u>	Questel/Orbit _____
Date Searcher Picked Up: _____	Bibliographic <u>(4)</u>	Dr. Link _____
Date Completed: <u>11-30-02</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>10</u>	Fulltext _____	Sequence Systems _____
Clerical Prep. Time: _____	Patent Family _____	WWW/Internet _____
Online Time: <u>100</u>	Other _____	Other (specify) _____

IN THE CLAIMS

What is claimed is:

1. A polymer binder for a fibrous sheet comprising:
an anionic polymer having a negative charge of between about 4 to about 12 milliequivalents per gram; and
a cationic polymer having a positive charge of between about 6 to about 12 milliequivalents per gram.

2. The binder of claim 1, wherein the molar ratio of total polyanion acid groups to total polycation groups is between about 10:1 to about 1.1:1.

3. The binder of claim 2, wherein the molar ratio of anionic polymer to cationic polymer is about 3:1.

4. The binder of claim 1, wherein the molecular size of the anionic polymer is between about 10,000 to about 900,000 grams per mole.

5. The binder of claim 1, wherein the anionic polymer is crosslinked.

6. The binder of claim 5, wherein the anionic polymer has a crosslinked density of up to about 1 per 50 units.

7. The binder of claim 1, wherein the molecular size of the cationic polymer is between about 10,000 to about 900,000 grams per mole.
8. The binder of claim 1, wherein the binder forms an interpolyelectrolyte complex.
9. The binder of claim 1, further including a spacer selected from the group consisting of a polysaccharide, a hydrogel, a latex and combinations thereof.
10. The binder of claim 9, wherein the polysaccharide comprises starch.
11. The binder of claim 1, further including a surfactant.
12. The binder of claim 11, wherein the surfactant is selected from the group consisting of alkylamines, fatty amines and combinations thereof.
13. The binder of claim 1, wherein anionic polymer to cationic polymer charge ratio is about 1:1.
14. The binder of claim 1, wherein the anionic polymer is selected from the group consisting of polycarbohydrates, polyphosphates, polysulfonates, polysulfates and combinations thereof.

15. The binder of claim 1, wherein the cationic polymer is selected from the group consisting of polymeric amine.

16. The binder of claim 15, wherein the polymeric amine is selected from the group consisting of primary amines, secondary amines, tertiary amines, quaternary amines and combinations thereof.

17. The binder of claim 1, wherein the anionic polymer is weakly acidic.

18. A method of forming a fibrous sheet comprising:

forming a fibrous slurry;

mixing into the fibrous slurry an anionic polymer having a negative charge of between about 4 to about 12 milliequivalents per gram;

mixing into the fibrous slurry a cationic polymer having a positive charge of between about 6 to about 12 milliequivalents per gram; and

drying the fibrous sheet to form the fibrous sheet.

19. The method of claim 18, wherein the molar ratio of total polyanion acid groups to total polycation groups is between about 10:1 to about 1.1:1.

20. The method of claim 19, wherein the molar ratio of anionic polymer to cationic polymer is about 3:1 .

[illegible]

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FILE 'HCA'

L1 171706 SEA BINDER?
L2 60491 SEA (ANIONIC? OR SULPHONIC? OR SULPHONAT? OR SULFONIC?
OR SULFONAT? OR POLYSULPHON? OR POLYSULFON? OR PHOSPHONAT
? OR POLYPHOSPHONAT? OR CARBOXY? OR POLYCARBOXY?) (2A) (POL
YM? OR COPOLYM? OR HOMOPOLYM? OR RESIN?)
L3 763 SEA (POLYCARBOHYDRAT? OR POLYPHOSPHAT? OR POLYSULFONAT?
OR POLYSULPHONAT? OR POLYSULPHAT? OR POLYSULFAT?) (2A) (POL
YM? OR COPOLYM? OR HOMOPOLYM? OR TERPOLYM? OR RESIN?)
L4 31695 SEA (CATIONIC? OR POLYAMINE# OR POLYAMINO# OR QUAT? (2A) AM
MONIUM?) (2A) (POLYM? OR COPOLYM? OR HOMOPOLYM? OR RESIN?)
OR POLYIONENE# OR POLY(2A) IONENE#
L5 17676 SEA (POLYMERIC? OR POLYMERIZ? OR POLYMERIS? OR POLYM# OR
COPOLYMERIC? OR COPOLYMERIZ? OR COPOLYMERIS? OR COPOLYM#
OR HOMOPOLYMERIC? OR HOMOPOLYMERIZ? OR HOMOPOLYMERIS? OR
HOMOPOLYM# OR TERPOLYMERIC? OR TERPOLYMERIZ? OR TERPOLYME
RIS? OR TERPOLYM# OR RESIN?) (2A) (AMINE# OR AMINO#)
L6 289500 SEA SHEET?

FILE 'LCA'

L7 7645 SEA (FILM? OR THINFILM? OR LAYER? OR OVERLAY? OR
OVERLAID? OR LAMIN? OR LAMEL? OR SHEET? OR LEAF? OR
FOIL? OR COAT? OR TOPCOAT? OR OVERCOAT? OR VENEER? OR
SHEATH? OR COVER? OR ENVELOP? OR ENCAS? OR ENWRAP? OR
OVERSPREAD?) /BI, AB
L8 2424 SEA (FIBER? OR FIBR? OR FILAMENT? OR THREAD? OR STRAND?
OR RIBBON? OR FILIFORM?) /BI, AB

FILE 'HCA'

L9 83523 SEA (FIBER? OR L8) (2A) (SHEET? OR L7)
L10 4775 SEA (L2 OR L3) AND (L4 OR L5)
L11 193 SEA L10 AND L1
L12 36 SEA L11 AND L6

FILE 'HCA'

L13 7 SEA L11 AND L9
L14 4068 SEA (MILLIEQ? OR MILLI (2A) (EQ# OR EQUIV?) OR MEQ) (2A) (GRA
M# OR GR# OR GM# OR G)
L15 0 SEA L12 AND L14
L16 32 SEA L10 AND L14
L17 0 SEA L16 AND L6

L18 0 SEA L16 AND L9
 L19 881772 SEA ADHESI? OR ADHERE? OR STICK? OR CLING? OR BONDER? OR
 CEMENT? OR CONGLUTIN? OR AGGLUTIN? OR MUCILAG? OR TACK?
 OR GLUE? OR GLUING# OR PASTE? OR PASTING# OR GUM? OR
 BINDER?
 L20 3 SEA L16 AND L19

FILE 'REGISTRY'

E A/PCT
 L21 11102 SEA "AMINO RESIN"/PCT
 L22 36137 SEA POLYAMINE/PCT
 L23 4391 SEA POLYIONENE/PCT
 ACT MAR266/A

 L24 STR
 L25 SCR 2043
 L26 20061 SEA SSS FUL L24 AND L25

FILE 'HCA'

L27 32172 SEA L21
 L28 43834 SEA L22
 L29 3315 SEA L23
 L30 20339 SEA L26
 L31 1707 SEA (L27 OR L28 OR L29) AND L30
 L32 112 SEA L31 AND L1
 L33 18 SEA L32 AND L6
 L34 1 SEA L32 AND L9
 L35 QUE ANION? OR CATION?
 L36 5 SEA L33 AND L35
 L37 342 SEA L31 AND L19
 L38 4 SEA L37 AND L9
 L39 0 SEA L31 AND L14
 L40 9180 SEA (L2 OR L3 OR L30) AND (L4 OR L5 OR L27 OR L28 OR
 L29)
 L41 544 SEA L40 AND L1
 L42 80 SEA L41 AND L6
 L43 13 SEA L42 AND L9
 L44 1923 SEA L40 AND L19
 L45 200 SEA L44 AND L6
 L46 16 SEA L45 AND L9
 L47 32 SEA L40 AND L14
 L48 30 SEA L47 AND (L1 OR L6 OR L9 OR L19 OR L35)
 L49 0 SEA L47 AND L1
 L50 0 SEA L47 AND L6
 L51 0 SEA L47 AND L9
 L52 3 SEA L47 AND L19
 L53 30 SEA L47 AND L35
 L54 237852 SEA CROSSLINK? OR CROSS?(2A) LINK?
 L55 17 SEA (L12 OR L16 OR L53) AND L54
 L56 19 SEA L13 OR L20 OR L34 OR L36 OR L38 OR L52
 L57 37 SEA (L33 OR L43 OR L46 OR L55) NOT L56

L58 26 SEA L12 NOT (L56 OR L57)
L59 16 SEA (L16 OR L53) NOT (L56 OR L57 OR L58)

=> d l26 que stat
L24 STR

C=C G1 5
1 2

VAR G1=SO3H/PO3H2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE
L25 SCR 2043
L26 20061 SEA FILE=REGISTRY SSS FUL L24 AND L25

100.0% PROCESSED 26264 ITERATIONS 20061 ANSWERS
SEARCH TIME: 00.00.01

=> file hca
FILE 'HCA'
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=> d l56 1-19 cbib abs hitstr hitind

L56 ANSWER 1 OF 19 HCA COPYRIGHT 2002 ACS
136:218447 Ink-jet printing method using high gloss core-shell
particle-containing recording element with good printability.
Wexler, Allan (Eastman Kodak Company, USA). Eur. Pat. Appl. EP
1184195 A2 20020306, 9 pp. DESIGNATED STATES: R: AT, BE, CH, DE,
DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI,
RO. (English). CODEN: EPXXDW. APPLICATION: EP 2001-203152
20010821. PRIORITY: US 2000-651845 20000831.
AB Title method comprises steps of (A) providing an ink jet printer
responsive to digital data signals, (B) loading the printer with ink
jet recording elements comprising (I) a support, (II) .gtoreq.1 base
layer manufd. from hydrophilic or porous materials, and (III) a
porous top layer (capable of either retaining or transporting an ink

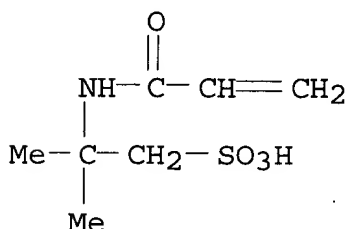
image) comprising a polymeric **binder** 50-95 wt.% and thermally-compliant core-shell particles 5-50 wt.%, wherein the shell contains 1 wt.% of inorg. colloidal particles with a particle size 0.5-10 .mu.m and the core is derived from 5-99 wt.% of thermoplastic polymers having a softening point >50.degree., (C) loading the printer with an ink jet ink compn., and (D) printing on the ink jet recording element using the ink jet ink in response to the digital data signals. Thus, a polyethylene resin-coated paper supported was coated with a base layer prepd. from gelatin, poly(vinyl pyrrolidone), and K 90, coated with a top layer prepd. from Witcobond 215 and core-shell particles derived from Kao C and Ludox TM 50 in the presence of poly(adipic acid-co-methylaminoethanol), then fused against Kapton at 150.degree. to give an ink-jet printing **sheet** with gloss 87.9, showing no layer cracking and good ink receptivity.

IT 27119-07-9, Poly(2-acrylamido-2-methylpropanesulfonic acid)
 62744-35-8, Poly(sodium styrenesulfonate)
 (base layer-contg.; ink-jet printing method using high gloss
 core-shell particle-contg. recording element)
 RN 27119-07-9 HCA
 CN 1-Propanesulfonic acid, 2-methyl-2-[(1-oxo-2-propenyl)amino]-,
 homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 15214-89-8

CMF C7 H13 N O4 S



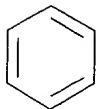
RN 62744-35-8 HCA
 CN Benzenesulfonic acid, ethenyl-, sodium salt, homopolymer (9CI) (CA
 INDEX NAME)

CM 1

CRN 27457-28-9

CMF C8 H8 O3 S . Na

CCI IDS

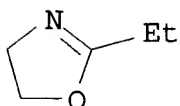


D1- CH=CH₂

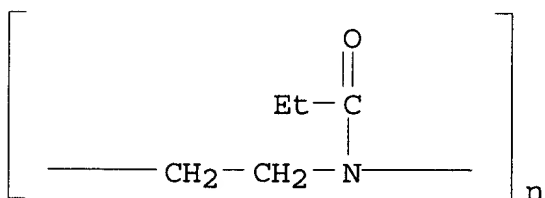
D1- SO₃H

● Na

IT 25805-17-8, Poly(2-ethyl-2-oxazoline) 69488-61-5,
 2-Ethyl-2-oxazoline homopolymer, SRU
 (binder; ink-jet printing method using high gloss
 core-shell particle-contg. recording element)
 RN 25805-17-8 HCA
 CN Oxazole, 2-ethyl-4,5-dihydro-, homopolymer (9CI) (CA INDEX NAME)
 CM 1
 CRN 10431-98-8
 CMF C5 H9 N O



RN 69488-61-5 HCA
 CN Poly[[(1-oxopropyl) imino] -1,2-ethanediyl] (9CI) (CA INDEX NAME)



IC ICM B41M005-00
 CC 42-12 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 74
 ST thermoplastic inorg colloidal particle ink jet printing

- sheet** method; core shell polyester silica ink jet printing
sheet method
- IT Polyurethanes, uses
 (**binder**; ink-jet printing method using high gloss
 core-shell particle-contg. recording element)
- IT Polyamines
 Polyoxyalkylenes, uses
 (**binder**; ink-jet printing method using high gloss
 core-shell particle-contg. recording element)
- IT Adhesives
 Ink-jet printing
 Ink-jet recording **sheets**
 (ink-jet printing method using high gloss core-shell
 particle-contg. recording element)
- IT 9003-01-4, Polyacrylic acid 9003-05-8, Polyacrylamide 9012-76-4,
 Chitosan 25213-24-5D, Vinylacetate-vinyl alcohol copolymer,
 partially hydrolyzed 27119-07-9, Poly(2-acrylamido-2-
 methylpropanesulfonic acid) 62744-35-8, Poly(sodium
 styrenesulfonate)
 (base layer-contg.; ink-jet printing method using high gloss
 core-shell particle-contg. recording element)
- IT 79-10-7D, Acrylic acid, esters, polymer 9002-85-1, Polyvinylidene
 chloride 9003-20-7, Polyvinyl acetate 9003-22-9, Vinyl
 acetate-vinyl chloride copolymer 9004-67-5, Methyl cellulose
 25037-78-9, Ethylene-vinyl chloride copolymer 25322-68-3,
 Polyethylene oxide 25805-17-8, Poly(2-ethyl-2-oxazoline)
 69488-61-5, 2-Ethyl-2-oxazoline homopolymer, SRU
 (**binder**; ink-jet printing method using high gloss
 core-shell particle-contg. recording element)
- IT 26062-79-3, Poly(diallyl dimethylammonium chloride)
 (**cationic** water-sol. modifier; ink-jet printing method
 using high gloss core-shell particle-contg. recording element)
- IT 60177-39-1, Benzenemethanaminium, ar-ethenyl-N,N,N-trimethyl-,
 chloride, polymer with diethenylbenzene
 (colloidal **cationic** latex modifier; ink-jet printing
 method using high gloss core-shell particle-contg. recording
 element)
- IT 25036-53-7, Kapton 25038-81-7
 (fusing **sheet**; ink-jet printing method using high gloss
 core-shell particle-contg. recording element)
- IT 9002-89-5, Poly(vinyl alcohol)
 (polymeric **binder**, Gohsenol Z 200; ink-jet printing
 method using high gloss core-shell particle-contg. recording
 element)
- IT 25767-43-5, Rhoplex B-60A 97928-80-8, Airflex 4500 206770-47-0,
 Witcobond W320 351878-31-4, Witcobond 215
 (polymeric **binder**; ink-jet printing method using high
 gloss core-shell particle-contg. recording element)
- L56 ANSWER 2 OF 19 HCA COPYRIGHT 2002 ACS
 136:218446 High gloss thermoplastic polymer core-inorganic colloidal
 particle shell-containing ink-jet recording element with good ink

absorptivity. Wexler, Allan (Eastman Kodak Company, USA). Eur. Pat. Appl. EP 1184194 A2 20020306, 9 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (English). CODEN: EPXXDW. APPLICATION: EP 2001-203140 20010820. PRIORITY: US 2000-652234 20000831.

AB Title element comprises (I) a support, (II) .gtoreq.1 base layer manufd. from hydrophilic or porous materials, and (III) a porous top layer (capable of either retaining or transporting an ink image) comprising a polymeric **binder** 50-95 wt.% and thermally-compliant core-shell particles 5-50 wt.%, wherein the shell contains 1 wt.% of inorg. colloidal particles with a particle size 0.5-10 .mu.m and the core is derived from 5-99 wt.% of thermoplastic polymers having a softening point >50.degree.. Thus, a polyethylene resin-coated paper support was coated with a base layer prepd. from gelatin, poly(vinyl pyrrolidone), and K 90, coated with a top layer prepd. from Witcobond 215 and core-shell particles derived from Kao C and Ludox TM 50 in the presence of poly(adipic acid-co-methylaminoethanol), then fused against Kapton at 150.degree. to give an ink-jet printing **sheet** with gloss 87.9, showing no layer cracking and good ink receptivity.

IT 27119-07-9, Poly(2-acrylamido-2-methylpropanesulfonic acid)
62744-35-8, Poly(sodium styrenesulfonate)

(base layer-contg.; manuf. of high gloss core-shell particle-contg. ink-jet recording element)

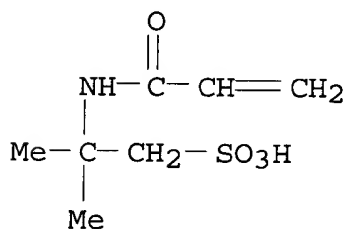
RN 27119-07-9 HCA

CN 1-Propanesulfonic acid, 2-methyl-2-[(1-oxo-2-propenyl)amino]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 15214-89-8

CMF C7 H13 N O4 S



RN 62744-35-8 HCA

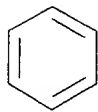
CN Benzenesulfonic acid, ethenyl-, sodium salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 27457-28-9

CMF C8 H8 O3 S . Na

CCI IDS

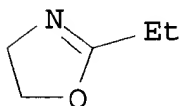


D1-CH=CH₂

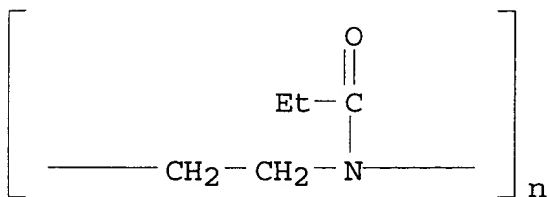
D1-SO₃H

● Na

IT 25805-17-8, Poly(2-ethyl-2-oxazoline) 69488-61-5,
 2-Ethyl-2-oxazoline homopolymer, SRU
 (binder; manuf. of high gloss core-shell
 particle-contg. ink-jet recording element)
 RN 25805-17-8 HCA
 CN Oxazole, 2-ethyl-4,5-dihydro-, homopolymer (9CI) (CA INDEX NAME)
 CM 1
 CRN 10431-98-8
 CMF C5 H9 N O



RN 69488-61-5 HCA
 CN Poly[[(1-oxopropyl) imino]-1,2-ethanediyl] (9CI) (CA INDEX NAME)



IC ICM B41M005-00
 CC 42-12 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 74
 IT Polyurethanes, uses
 (binder; manuf. of high gloss core-shell

- particle-contg. ink-jet recording element)
- IT Polyamines
Polyoxyalkylenes, uses
Silanes
(**binder**; manuf. of high gloss core-shell
particle-contg. ink-jet recording element)
- IT Adhesives
Ink-jet printing
Ink-jet recording **sheets**
(manuf. of high gloss core-shell particle-contg. ink-jet
recording element)
- IT 9003-01-4, Polyacrylic acid 9003-05-8, Polyacrylamide 9003-39-8,
K 90 9012-76-4, Chitosan 25213-24-5D, Vinylacetate-vinyl alcohol
copolymer, partially hydrolyzed **27119-07-9**,
Poly(2-acrylamido-2-methylpropanesulfonic acid) **62744-35-8**
, Poly(sodium styrenesulfonate)
(base layer-contg.; manuf. of high gloss core-shell
particle-contg. ink-jet recording element)
- IT 9002-89-5, Poly(vinyl alcohol)
(**binder**, Gohsenol Z 200; manuf. of high gloss
core-shell particle-contg. ink-jet recording element)
- IT 25767-43-5, Rhoplex B-60A 97928-80-8, Airflex 4500 206770-47-0,
Witcobond W320 351878-31-4, Witcobond 215
(**binder**; manuf. of high gloss core-shell
particle-contg. ink-jet recording element)
- IT 79-10-7D, Acrylic acid, esters, polymer 9002-85-1, Polyvinylidene
chloride 9003-20-7, Polyvinyl acetate 9003-22-9, Vinyl
acetate-vinyl chloride copolymer 9004-67-5, Methyl cellulose
25037-78-9, Ethylene-vinyl chloride copolymer 25322-68-3,
Polyethylene oxide **25805-17-8**, Poly(2-ethyl-2-oxazoline)
69488-61-5, 2-Ethyl-2-oxazoline homopolymer, SRU
(**binder**; manuf. of high gloss core-shell
particle-contg. ink-jet recording element)
- IT 26062-79-3, Poly(diallyl dimethylammonium chloride)
(**cationic** water-sol. modifier; manuf. of high gloss
core-shell particle-contg. ink-jet recording element)
- IT 60177-39-1, Benzenemethanaminium, ar-ethenyl-N,N,N-trimethyl-,
chloride, polymer with diethenylbenzene
(colloidal **cationic** latex modifier; manuf. of high
gloss core-shell particle-contg. ink-jet recording element)

L56 ANSWER 3 OF 19 HCA COPYRIGHT 2002 ACS

135:374195 Fabrication of a lithium secondary battery comprising a
superfine **fibrous** polymer separator **film**. Yun,
Kyung Suk; Cho, Byung Won; Jo, Seong Mu; Lee, Wha Seop; Cho, Won Il;
Park, Kun You; Kim, Hyung Sun; Kim, Un Seok; Ko, Seok Ku; Chun, Suk
Won; Choi, Sung Won (Korea Institute of Science and Technology, S.
Korea). PCT Int. Appl. WO 2001089022 A1 20011122, 34 pp.
DESIGNATED STATES: W: JP, KR, US. (English). CODEN: PIXXD2.
APPLICATION: WO 2000-KR500 20000519.

AB The present invention provides a lithium secondary battery and its
fabrication method. More particularly, the present invention

provides a lithium secondary battery comprising a super fine fibrous porous polymer separator film and its fabrication method, wherein the porous polymer separator film is fabricated by the following process: (a) melting at least one polymer or dissolving at least one polymer with org. solvents to obtain at least one polymeric melt or at least one polymeric soln.; (b) adding the obtained polymeric melt or polymeric soln. to barrels of an electrospinning machine; and (c) discharging the polymeric melt or polymeric soln. onto a substrate using a nozzle to form a porous separator film. The lithium secondary battery of the present invention has the advantages of better **adhesion** with electrodes, good mech. strength, better performance at low and high temps., and better compatibility with org. electrolyte soln. of a lithium secondary battery.

IT 26101-52-0 26913-06-4, Poly[imino(1,2-ethanediyl)]
(fabrication of lithium secondary battery comprising superfine **fibrous** polymer separator **film**)

RN 26101-52-0 HCA

CN Ethenesulfonic acid, homopolymer (9CI) (CA INDEX NAME)

CM 1

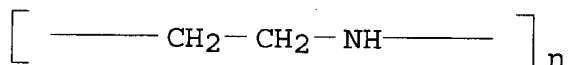
CRN 1184-84-5

CMF C2 H4 O3 S



RN 26913-06-4 HCA

CN Poly[imino(1,2-ethanediyl)] (9CI) (CA INDEX NAME)



IC ICM H01M010-40

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38

IT Secondary battery separators
(fabrication of lithium secondary battery comprising superfine **fibrous** polymer separator **film**)

IT Alcohols, uses
Polyoxyalkylenes, uses
(fabrication of lithium secondary battery comprising superfine **fibrous** polymer separator **film**)

IT Fluoropolymers, uses
(fabrication of lithium secondary battery comprising superfine **fibrous** polymer separator **film**)

IT Secondary batteries
(lithium; fabrication of lithium secondary battery comprising superfine **fibrous** polymer separator **film**)

IT Fibers
(spinning, electro-; fabrication of lithium secondary battery

comprising superfine **fibrous** polymer separator
film)

IT 67-64-1, Acetone, uses 67-68-5, DmsO, uses 68-12-2, Dmf, uses
79-20-9, Methyl acetate 80-73-9, 1,3-Dimethyl-2-imidazolidinone
96-48-0, Butyrolactone 96-49-1, Ethylene carbonate 105-37-3,
Ethyl propionate 105-58-8, Diethyl carbonate 108-32-7, Propylene
carbonate 109-99-9, Thf, uses 110-71-4, 1,2-Dimethoxyethane
127-19-5, Dimethyl acetamide 141-78-6, Ethyl acetate, uses
143-24-8, Tetraethyleneglycol dimethyl ether 554-12-1, Methyl
propionate 616-38-6, Dimethyl carbonate 623-53-0, Ethylmethyl
carbonate 872-50-4, n-Methyl-2-pyrrolidone, uses 4437-85-8,
Butylene carbonate 7782-42-5, Graphite, uses 7791-03-9, Lithium
perchlorate 9002-86-2, Pvc 9002-88-4, Polyethylene 9003-07-0,
Polypropylene 9003-20-7, Polyvinyl acetate 9004-34-6, Cellulose,
uses 9004-35-7, Cellulose acetate 9004-36-8 9004-39-1,
Cellulose acetate propionate 9010-76-8, Acrylonitrile-vinylidene
chloride copolymer 9010-88-2, Ethyl acrylate-methyl methacrylate
copolymer 9011-14-7, Pmma 9011-17-0, Hexafluoropropylene-
vinylidene fluoride copolymer 12190-79-3, Cobalt lithium oxide
colio2 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium
hexafluorophosphate 24936-67-2, Polyethylenesulfide 24937-79-9,
Pvdf 25014-41-9, Polyacrylonitrile 25086-89-9, Vinyl
acetate-vinyl pyrrolidone copolymer 25266-14-2 25322-68-3, Peo
25322-69-4, Polypropylene oxide 25569-53-3, Polyethylenesuccinate
25749-57-9, Acrylonitrile-methacrylic acid copolymer
26101-52-0 26913-06-4, Poly[imino(1,2-ethanediyl)]
29935-35-1, Lithium hexafluoroarsenate 33454-82-9, Lithium
triflate 98973-15-0

(fabrication of lithium secondary battery comprising superfine
fibrous polymer separator film)

IT 554-13-2, Lithium carbonate 1344-28-1, Alumina, uses 9002-84-0,
Ptfe

(fabrication of lithium secondary battery comprising superfine
fibrous polymer separator film)

IT 1304-28-5, Barium monoxide, uses 1309-48-4, Magnesia, uses
1310-65-2, Lithium hydroxide 1313-59-3, Sodium oxide na2O, uses
7631-86-9, Silica, uses 7789-24-4, Lithium fluoride, uses
12003-67-7, Aluminum lithium oxide alio2 12047-27-7, Barium
titanium oxide batio3, uses 12057-24-8, Lithia, uses 13463-67-7,
Titania, uses 26134-62-3, Lithium nitride

(filling agent; fabrication of lithium secondary battery
comprising superfine **fibrous** polymer separator
film)

L56 ANSWER 4 OF 19 HCA COPYRIGHT 2002 ACS

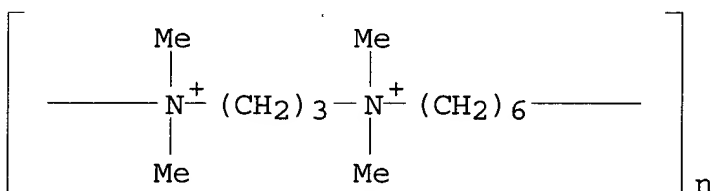
133:198384 Cosmetic compositions containing a hydroxyalkyl ether anionic
surfactant and a **cationic polymer**. Garnier,
Nathalie; Cauwet-Martin, Daniele; Restle, Serge (L'oreal, Fr.).
Eur. Pat. Appl. EP 1029533 A1 20000823, 18 pp. DESIGNATED STATES:
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO. (French). CODEN: EPXXDW. APPLICATION: EP
2000-400147 20000120. PRIORITY: FR 1999-1866 19990216.

AB Detergent cosmetic compns. contain an anionic surfactant such as hydroxyalkyl ether and a **cationic** non-cellulosic **polymer**, whose charge d. is .ltoreq.2 meq/g. Thus, a shampoo contained Beaulight Shaa [sodium 2-(2-hydroxylauryloxy)acetate] 15, Merquat-550 1, citric acid 7, and water to 100 g.

IT **68393-49-7**, Mexomere PO
(cosmetic compns. contg. hydroxyalkyl ether anionic surfactant and **cationic polymer**)

RN 68393-49-7 HCA

CN Poly[(dimethyliminio)-1,3-propanediyl(dimethyliminio)-1,6-hexanediyl dichloride] (9CI) (CA INDEX NAME)



● 2 Cl⁻

IC ICM A61K007-50

CC 62-3 (Essential Oils and Cosmetics)
Section cross-reference(s): 37

ST hydroxyalkyl ether anionic surfactant cosmetic; **cationic polymer** cosmetic; shampoo **cationic polymer anionic** surfactant

IT Fatty acids, biological studies
(C16-40; cosmetic compns. contg. hydroxyalkyl ether anionic surfactant and **cationic polymer**)

IT Polyelectrolytes
Surfactants
(amphoteric; cosmetic compns. contg. hydroxyalkyl ether anionic surfactant and **cationic polymer**)

IT Polyelectrolytes
Surfactants
(anionic; cosmetic compns. contg. hydroxyalkyl ether anionic surfactant and **cationic polymer**)

IT Polyelectrolytes
Surfactants
(cationic; cosmetic compns. contg. hydroxyalkyl ether anionic surfactant and **cationic polymer**)

IT Cosmetics
Hair preparations
Perfumes
Preservatives
Shampoos

- Skin
- Sunscreens
- Thickening agents
 - (cosmetic compns. contg. hydroxyalkyl ether anionic surfactant and **cationic polymer**)
- IT Acrylic polymers, biological studies
- Ceramides
- Ionene polymers
- Polyamines
- Polysiloxanes, biological studies
- Protein hydrolyzates
- Proteins, general, biological studies
- Vitamins
 - (cosmetic compns. contg. hydroxyalkyl ether anionic surfactant and **cationic polymer**)
- IT Carboxylic acids, biological studies
 - (hydroxy, ethers; cosmetic compns. contg. hydroxyalkyl ether anionic surfactant and **cationic polymer**)
- IT Surfactants
 - (nonionic; cosmetic compns. contg. hydroxyalkyl ether anionic surfactant and **cationic polymer**)
- IT Fats and Glyceridic oils, biological studies
 - (vegetable; cosmetic compns. contg. hydroxyalkyl ether anionic surfactant and **cationic polymer**)
- IT 81-13-0, Panthenol 1398-61-4D, Chitin, derivs. 9004-82-4, Sodium lauryl ether sulfate 11138-66-2, Xanthan **gum** 26062-79-3, Diallyldimethylammonium chloride homopolymer 26590-05-6, Merquat 550 29297-55-0D, 1-Vinylimidazole-1-vinyl-2-pyrrolidonecopolymer, quaternized 36332-93-1, 18-Methyleicosanoic acid **68393-49-7**, Mexomere PO 119793-28-1, Beaulight Shaa
 - (cosmetic compns. contg. hydroxyalkyl ether anionic surfactant and **cationic polymer**)
- L56 ANSWER 5 OF 19 HCA COPYRIGHT 2002 ACS
- 129:88032 Laminated film as precursor of sublimation-type thermal-transfer printing material. Watanabe, Shigeyuki (Diafoil Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 10146937 A2 19980602 Heisei, 10 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1996-322262 19961118.
- AB The film consists of a polyester support and layers for easy **adhesion** on both sides, i.e., an underlayer for an ink layer on 1 side and an underlayer for sliding layer on the other side. The fixing strength is .ltoreq.100 g/125 mm among the **adhesion** layers on the films in laminating (for storage) after 24 h at 50.degree. and relative humidity 80% under 10 kg/cm2 and a thickness of the film (calcd. from the wt. of a specified area and d. of the whole layer, information is in the disclosure) is 1.0-6.0 .mu.m. The film after storage under severe condition can be converted to sublimation-type thermal-transfer printing ribbon, etc., without trouble.
- IT **209115-22-0P**, Acrylic acid-butyl acrylate-diethylene glycol-ethylene glycol-formaldehyde-melamine-methyl

methacrylate-sodium 5-sulfoisophthalate-styrene-terephthalic acid copolymer **209115-23-1P**, Diethylene glycol-ethylene glycol-formaldehyde-melamine-isophthalic acid-pyromellitic acid-terephthalic acid copolymer **209115-24-2P**, Acrylic acid-butyl acrylate-diethylene glycol-N,N-dimethylaminoethyl methacrylate-ethylene glycol-2-isopropenyl-2-oxazoline-methyl methacrylate-polyethylene glycol monomethacrylate-sodium methallylsulfonate-sodium 5-sulfoisophthalate-sodium p-styrenesulfonate-styrene-terephthalic acid copolymer **209265-20-3P**, Acrylic acid-butyl acrylate-diethylene glycol-N,N-dimethylaminoethyl methacrylate-ethylene glycol-methyl methacrylate-polyethylene glycol monomethacrylate-sodium methallylsulfonate-sodium p-styrenesulfonate-sodium 5-sulfoisophthalate-styrene-terephthalic acid-tetraglycerol tetraglycidyl ether copolymer

(**adhesive**; laminated film having **adhesive** layer with fixing resistance in storage for sublimation thermal-transfer printing ribbon)

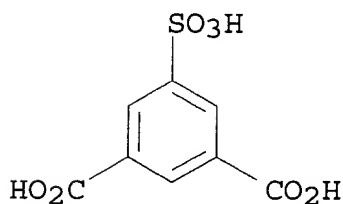
RN 209115-22-0 HCA

CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, sodium salt, polymer with 1,4-benzenedicarboxylic acid, butyl 2-propenoate, 1,2-ethanediol, ethenylbenzene, formaldehyde, methyl 2-methyl-2-propenoate, 2,2'-oxybis[ethanol], 2-propenoic acid and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 7800-91-1

CMF C8 H6 O7 S . x Na

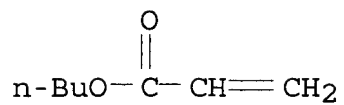


●x Na

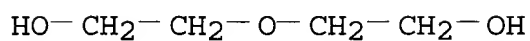
CM 2

CRN 141-32-2

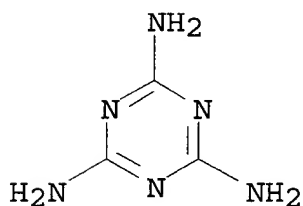
CMF C7 H12 O2



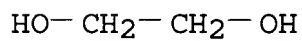
CM 3

CRN 111-46-6
CMF C4 H10 O3

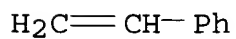
CM 4

CRN 108-78-1
CMF C3 H6 N6

CM 5

CRN 107-21-1
CMF C2 H6 O2

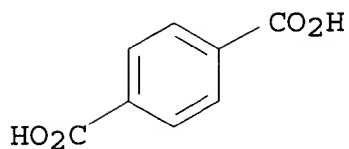
CM 6

CRN 100-42-5
CMF C8 H8

CM 7

CRN 100-21-0

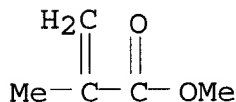
CMF C8 H6 O4



CM 8

CRN 80-62-6

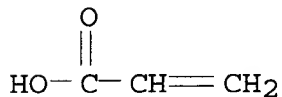
CMF C5 H8 O2



CM 9

CRN 79-10-7

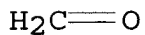
CMF C3 H4 O2



CM 10

CRN 50-00-0

CMF C H2 O



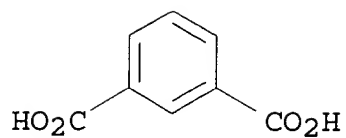
RN 209115-23-1 HCA

CN 1,2,4,5-Benzenetetracarboxylic acid, polymer with
 1,3-benzenedicarboxylic acid, 1,4-benzenedicarboxylic acid,
 1,2-ethanediol, formaldehyde, 2,2'-oxybis[ethanol] and
 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

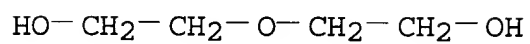
CM 1

CRN 121-91-5

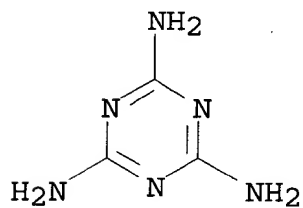
CMF C8 H6 O4



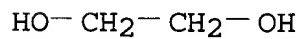
CM 2

CRN 111-46-6
CMF C4 H10 O3

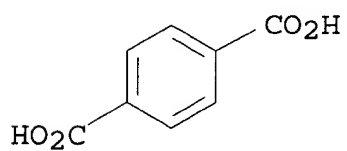
CM 3

CRN 108-78-1
CMF C3 H6 N6

CM 4

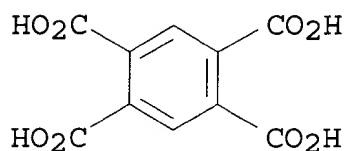
CRN 107-21-1
CMF C2 H6 O2

CM 5

CRN 100-21-0
CMF C8 H6 O4

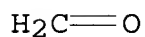
CM 6

CRN 89-05-4
CMF C10 H6 O8



CM 7

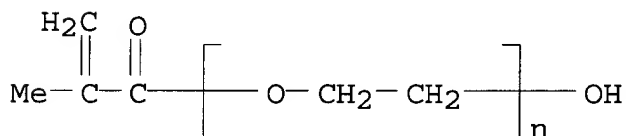
CRN 50-00-0
CMF C H2 O



RN 209115-24-2 HCA
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, sodium salt, polymer with 1,4-benzenedicarboxylic acid, butyl 2-propenoate, 4,5-dihydro-2-(1-methylethenyl)oxazole, 2-(dimethylamino)ethyl 2-methyl-2-propenoate, 1,2-ethanediol, ethenylbenzene, .alpha.-(2-methyl-1-oxo-2-propenyl)-.omega.-hydroxypoly(oxy-1,2-ethanediyl), methyl 2-methyl-2-propenoate, 2,2'-oxybis[ethanol], 2-propenoic acid, sodium 4-ethenylbenzenesulfonate and sodium 2-methyl-2-propene-1-sulfonate (9CI) (CA INDEX NAME)

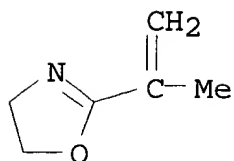
CM 1

CRN 25736-86-1
CMF (C2 H4 O)_n C4 H6 O2
CCI PMS



CM 2

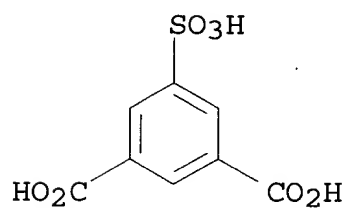
CRN 10471-78-0
CMF C6 H9 N O



CM 3

CRN 7800-91-1

CMF C8 H6 O7 S . x Na

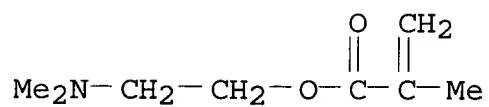


● x Na

CM 4

CRN 2867-47-2

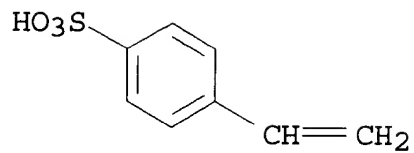
CMF C8 H15 N O2



CM 5

CRN 2695-37-6

CMF C8 H8 O3 S . Na

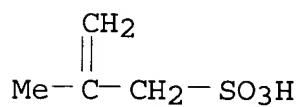


● Na

CM 6

CRN 1561-92-8

CMF C4 H8 O3 S . Na

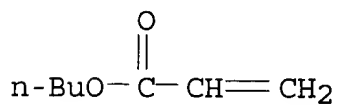


● Na

CM 7

CRN 141-32-2

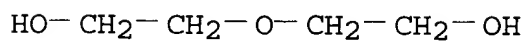
CMF C7 H12 O2



CM 8

CRN 111-46-6

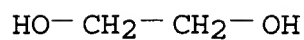
CMF C4 H10 O3



CM 9

CRN 107-21-1

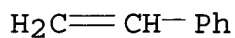
CMF C2 H6 O2



CM 10

CRN 100-42-5

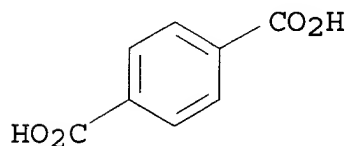
CMF C8 H8



CM 11

CRN 100-21-0

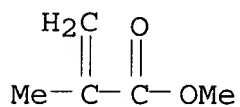
CMF C8 H6 O4



CM 12

CRN 80-62-6

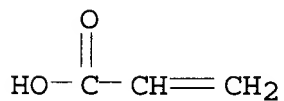
CMF C5 H8 O2



CM 13

CRN 79-10-7

CMF C3 H4 O2



RN 209265-20-3 HCA

CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, sodium salt, polymer with
1,4-benzenedicarboxylic acid, butyl 2-propenoate,

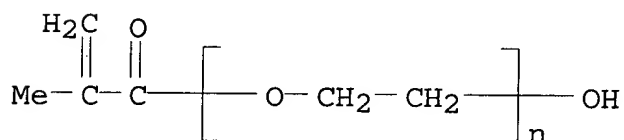
4,5-dihydro-2-(1-methylethenyl)oxazole, 2-(dimethylamino)ethyl
 2-methyl-2-propenoate, 1,2-ethanediol, ethenylbenzene, methyl
 2-methyl-2-propenoate, .alpha.-(2-methyl-1-oxo-2-propenyl)-.omega.-
 hydroxypoly(oxy-1,2-ethanediyl), 2,2'-oxybis[ethanol], 2-propenoic
 acid, sodium 4-ethenylbenzenesulfonate, sodium 2-methyl-2-propene-1-
 sulfonate and tetraglycerol tetrakis(oxiranylmethyl) ether (9CI)
 (CA INDEX NAME)

CM 1

CRN 25736-86-1

CMF (C2 H4 O)_n C4 H6 O2

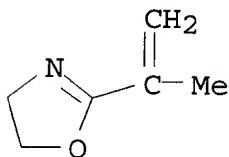
CCI PMS



CM 2

CRN 10471-78-0

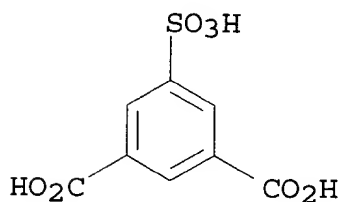
CMF C6 H9 N O



CM 3

CRN 7800-91-1

CMF C8 H6 O7 S . x Na

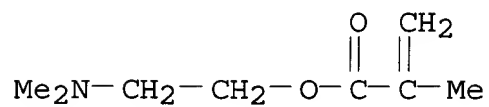


● x Na

CM 4

CRN 2867-47-2

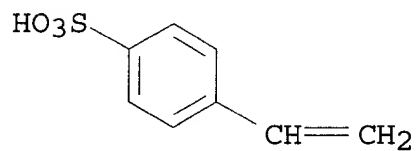
CMF C8 H15 N O2



CM 5

CRN 2695-37-6

CMF C8 H8 O3 S . Na

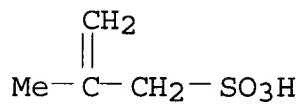


● Na

CM 6

CRN 1561-92-8

CMF C4 H8 O3 S . Na

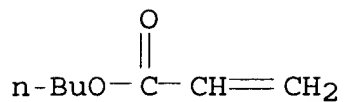


● Na

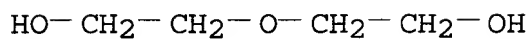
CM 7

CRN 141-32-2

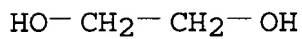
CMF C7 H12 O2



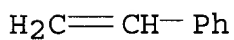
CM 8

CRN 111-46-6
CMF C4 H10 O3

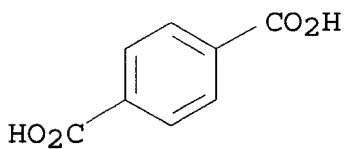
CM 9

CRN 107-21-1
CMF C2 H6 O2

CM 10

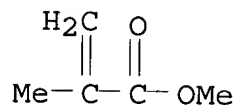
CRN 100-42-5
CMF C8 H8

CM 11

CRN 100-21-0
CMF C8 H6 O4

CM 12

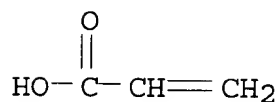
CRN 80-62-6
CMF C5 H8 O2



CM 13

CRN 79-10-7

CMF C3 H4 O2



CM 14

CRN 112477-66-4

CMF C24 H42 O13

CCI IDS

CM 15

CRN 56491-53-3

CMF C12 H26 O9

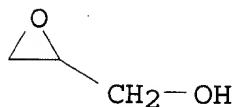
CCI IDS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 16

CRN 556-52-5

CMF C3 H6 O2



IC ICM B32B027-36

ICS B41M005-38

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

ST laminated film thermal transfer printing material; **adhesive** surface layer laminated film; ink layer underlayer **adhesive** laminated film; sliding layer underlayer **adhesive** laminated film; fixing prevention storage **adhesive** coated filmIT **Adhesives**

Plastic films

(laminated film having **adhesive** layer with fixing resistance in storage for sublimation thermal-transfer printing ribbon)

- IT Laminated plastics, uses
(laminated film having **adhesive** layer with fixing resistance in storage for sublimation thermal-transfer printing ribbon)
- IT Thermal-transfer printing materials
(**ribbons**, sublimation; **laminated film** having **adhesive** layer with fixing resistance in storage for sublimation thermal-transfer printing ribbon)
- IT Polyesters, uses
(support; laminated film having **adhesive** layer with fixing resistance in storage for sublimation thermal-transfer printing ribbon)
- IT Printer ribbons
(thermal-transfer, sublimation; laminated film having **adhesive** layer with fixing resistance in storage for sublimation thermal-transfer printing ribbon)
- IT 209115-21-9P, Acrylic acid-butyl acrylate-diethylene glycol-ethylene glycol-2-isopropenyl-2-oxazoline-methyl methacrylate-sodium 5-sulfoisophthalate-styrene-terephthalic acid copolymer
209115-22-0P, Acrylic acid-butyl acrylate-diethylene glycol-ethylene glycol-formaldehyde-melamine-methyl methacrylate-sodium 5-sulfoisophthalate-styrene-terephthalic acid copolymer
209115-23-1P, Diethylene glycol-ethylene glycol-formaldehyde-melamine-isophthalic acid-pyromellitic acid-terephthalic acid copolymer
209115-24-2P, Acrylic acid-butyl acrylate-diethylene glycol-N,N-dimethylaminoethyl methacrylate-ethylene glycol-2-isopropenyl-2-oxazoline-methyl methacrylate-polyethylene glycol monomethacrylate-sodium methallylsulfonate-sodium 5-sulfoisophthalate-sodium p-styrenesulfonate-styrene-terephthalic acid copolymer
209265-19-0P, Acrylic acid-butyl acrylate-diethylene glycol-ethylene glycol-methyl methacrylate-sodium 5-sulfoisophthalate-styrene-terephthalic acid-tetraglycerol tetraglycidyl ether copolymer
209265-20-3P, Acrylic acid-butyl acrylate-diethylene glycol-N,N-dimethylaminoethyl methacrylate-ethylene glycol-methyl methacrylate-polyethylene glycol monomethacrylate-sodium methallylsulfonate-sodium p-styrenesulfonate-sodium 5-sulfoisophthalate-styrene-terephthalic acid-tetraglycerol tetraglycidyl ether copolymer
(**adhesive**; laminated film having **adhesive** layer with fixing resistance in storage for sublimation thermal-transfer printing ribbon)
- IT 9011-14-7P, Poly(methyl methacrylate)
(in laminated film having **adhesive** layer with fixing resistance in storage for sublimation thermal-transfer printing ribbon)
- IT 25038-59-9, PET (polyester), uses
(support; laminated film having **adhesive** layer with

fixing resistance in storage for sublimation thermal-transfer printing ribbon)

L56 ANSWER 6 OF 19 HCA COPYRIGHT 2002 ACS

128:231358 Manufacture of highly-filled **fibrous**-reinforced **sheet** with improved filler retention. Barrows, William D.; Crouse, George H.; Morton, John F. (Congoleum Corporation, USA). U.S. US 5736008 A 19980407, 8 pp. (English). CODEN: USXXAM. APPLICATION: US 1993-45467 19930408.

AB Title sheet is formed by continuously feeding onto a moving porous support surface, an aq. dispersion of fibers, calcium carbonate filler comprising .gtoreq..apprx.50 wt.% of the solids portion, a **cationic polymeric** flocculant having a charge-d. of at least about 2 equiv of cationic nitrogen per kg of **polymer**, an **anionic polymer binder**, and, optionally, carbon black to impart opacity to paper or sheet that has a white appearance. Thus, a slurry comprising CaCO₃ 80.04, alum coagulant 0.1, cellulosic fibers 7.4, glass fibers 1.00, polyacrylamide coagulant 0.19, antioxidant 0.15, **carboxylated** styrene-butadiene **copolymer binder** 11.00, and Hydraid CMP 452 cationic flocculant 0.08 parts in 5 L water was formed into a sheet with 1.45% wt. loss with freeness (drainage) increasing from 10 s to 15-25 s, compared with 2.4% wt. loss and 35 s, resp., for a slurry contg. a cationic polyacrylamide flocculant.

IC ICM D21H005-18

NCL 162102000

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 43

ST calcium carbonate filler retention sheet manuf; **cationic polymer** flocculant filler retention sheet; **anionic polymer binder** filler retention sheet; carbon black opacifier **fiber** reinforced **sheet**; cellulosic glass **fiber sheet** filler retention; **carboxylated** butadiene styrene **copolymer** flocculant

IT Opacifiers

(carbon black; manuf. of highly-filled **fibrous** -reinforced **sheet** with improved filler retention)

IT Flocculants

(**cationic polymers**; manuf. of highly-filled **fibrous**-reinforced **sheet** with improved filler retention)

IT Polyelectrolytes

(cationic, flocculant; manuf. of highly-filled **fibrous** -reinforced **sheet** with improved filler retention)

IT Fibers

(cellulosic; manuf. of highly-filled **fibrous**-reinforced **sheet** with improved filler retention)

IT Limestone, uses

(ground, filler; manuf. of highly-filled **fibrous** -reinforced **sheet** with improved filler retention)

- IT Paper
Paper substitutes
(manuf. of highly-filled **fibrous**-reinforced **sheet** with improved filler retention)
- IT Glass fibers, uses
(manuf. of highly-filled **fibrous**-reinforced **sheet** with improved filler retention)
- IT Carbon black, uses
(opacifier for white sheets; manuf. of highly-filled **fibrous**-reinforced **sheet** with improved filler retention)
- IT 9003-55-8D, Butadiene-styrene **copolymer**, **carboxylated**
(**binder**; manuf. of highly-filled **fibrous**-reinforced **sheet** with improved filler retention)
- IT 471-34-1, Calcium carbonate, uses
(filler; manuf. of highly-filled **fibrous**-reinforced **sheet** with improved filler retention)
- IT 176201-29-9, Hydraid CMP 452
(high charge-d. cationic flocculant; manuf. of highly-filled **fibrous**-reinforced **sheet** with improved filler retention)
- L56 ANSWER 7 OF 19 HCA COPYRIGHT 2002 ACS
- 128:129586 Composite filter sheet for purification of photoresist solutions. Hou, Kenneth C.; Ostreicher, Eugene A.; Sale, Richard D. (Cuno Incorporated, USA). PCT Int. Appl. WO 9804348 A1 19980205, 35 pp. DESIGNATED STATES: W: AU, CA, JP, KR, MX; RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1997-US13412 19970730. PRIORITY: US 1996-22793 19960730.
- AB A filter sheet is described which comprises a self-supporting fibrous matrix (15-80 wt.%) contg. immobilized particulate filter aids (5-40 wt.%) and particulate ion exchange resins (5-65 wt.%) distributed uniformly throughout the cross section of the matrix. The matrix can be polyacrylonitrile fibers, nylon fibers, rayon fibers, PVC fibers, cellulose fibers or cellulose acetate fibers. The ion exchange resins can be a mixt. of cation and anion exchangers. The filter aid may be diatomaceous earth, magnesia, perlite, talc, colloidal silica, polymer particles, activated carbon, mol. sieves or clays. The filter may also contains a **binder** resin, e.g., an epichlorohydrin polyamide-**polyamine copolymer**, at 0.05-2.0 wt.%. Ionic impurities, e.g., metals, are removed from a photoresist soln. by passing the soln. through the filter sheet.
- IC ICM B01J047-00
ICS B01J020-28; B01J047-12
- CC 47-2 (Apparatus and Plant Equipment)
Section cross-reference(s): 38, 76
- ST filter **sheet fiber** ion exchanger composite;
photoresist soln purifn ion exchanger filter
- IT Acetate fibers, uses

Acrylic fibers, uses

Clays, uses

Perlite

Polyamide fibers, uses

Rayon, uses

Vinyon **fibers**

(composite filter **sheet** for purifn. of photoresist solns.)

IT Filters

(**fiber**; composite filter **sheet** for purifn. of photoresist solns.)

IT **Polyamines**

Polyamines

(polyamide-, epichlorohydrin **resins**; composite filter sheet for purifn. of photoresist solns.)

IT Polyamides, uses

Polyamides, uses

(**polyamine**-, epichlorohydrin **resins**; composite filter sheet for purifn. of photoresist solns.)

IT Phenolic **resins**, uses

(**sulfonated**; composite filter sheet for purifn. of photoresist solns.)

IT 9003-70-7D, Divinylbenzene-styrene **copolymer**, **sulfonated**

(PrCH; composite filter sheet for purifn. of photoresist solns.)

IT 106-89-8D, polyamide-polyamines 1309-48-4, Magnesia, uses

9003-35-4D, **sulfonated** 14807-96-6, Talc, uses 26355-74-8D,

Benzaldehyde-phenol **copolymer**, **sulfonated**

50602-21-6D, Divinylbenzene-methacrylic acid **copolymer**,

sulfonated 59680-46-5, Kymene 557H

(composite filter sheet for purifn. of photoresist solns.)

L56 ANSWER 8 OF 19 HCA COPYRIGHT 2002 ACS

128:77587 Battery separators and secondary alkaline batteries using the separators. Sakai, Tetsuo; Uehara, Itsuki; Nishida, Masaaki; Yamashita, Hiroshi; Tamura, Koichi (Kanai Juyo Kogyo K. K., Japan; Agency of Industrial Sciences and Technology). Jpn. Kokai Tokkyo Koho JP 09330694 A2 19971222 Heisei, 12 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1997-58177 19970312. PRIORITY: JP 1996-58697 19960315.

AB The separators are porous **sheets** of org. **fibers** contg. fine ion exchanger particles adhered to the surface and the crossing points of the fibers by a **binder** resin, which is sol. in org. solvent and filled and locked in the pores and grooves on the surface of the fibers. The ion exchanger particles may contain **cationic** polystyrene **resins**; **anionic** polystyrene, polyacrylic, or phenolic resins; or styrene, acrylic, pyridine based chelating resins; TiO₂; Al₂O₃; Sb oxide; K titanate; and/or ZrO₂. The **binder** is preferably a polystyrene, polyolefin, or a halogenated polyolefin, esp. a styrene-ethylene-butylene-styrene thermoplastic.

IC ICM H01M002-16

ICS H01M002-18; H01M010-24
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

L56 ANSWER 9 OF 19 HCA COPYRIGHT 2002 ACS

128:55414 Ink-jet printing **sheet** for transparency preparation.
 Malhotra, Shadi L.; Naik, Kirit N.; MacKinnon, David N.; Jones,
 Arthur Y. (Xerox Corp., USA). U.S. US 5683793 A 19971104, 20 pp.
 (English). CODEN: USXXAM. APPLICATION: US 1996-657134 19960603.

AB The title printing **sheet** comprises a supporting substrate,
 thereover a first coating layer comprised of an ink-absorbing layer
 and a biocide and a second ink-spreading coating layer comprised of
 a hydrophilic vinyl **binder**, a dye mordant, a filler, an
 optional light fastness-inducing agent, and an ink spot
 size-increasing agent selected from the group consisting of hydroxy
 acids, amino acids, and polycarboxyl compds., wherein the first
 coating layer is in contact with the substrate and is situated
 between the substrate and the second ink coating layer and the
 transparency prep. possesses a haze value of from about 0.5 to
 about 10 and a light fastness value of from about 95 to about 98.

IT 25805-17-8, Poly(2-ethyl-2-oxazoline) 29690-74-2,
 Poly(vinyl phosphate) 82451-48-7 199926-46-0
 (ink-jet printing **sheets** for transparency prepn.
 contg.)

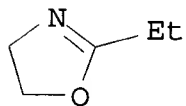
RN 25805-17-8 HCA

CN Oxazole, 2-ethyl-4,5-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 10431-98-8

CMF C5 H9 N O



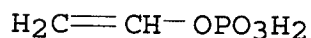
RN 29690-74-2 HCA

CN Phosphoric acid, monoethenyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 36885-49-1

CMF C2 H5 O4 P



RN 82451-48-7 HCA

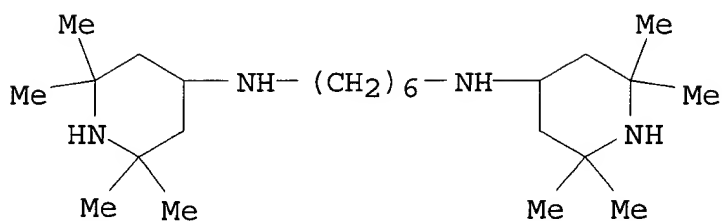
CN 1,6-Hexanediamine, N,N'-bis(2,2,6,6-tetramethyl-4-piperidinyl)-,
 polymer with 2,4-dichloro-6-(4-morpholinyl)-1,3,5-triazine (9CI)

(CA INDEX NAME)

CM 1

CRN 61260-55-7

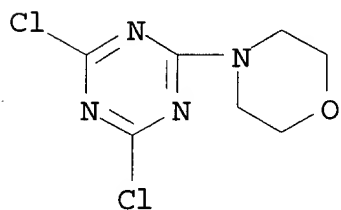
CMF C24 H50 N4



CM 2

CRN 6601-22-5

CMF C7 H8 Cl2 N4 O



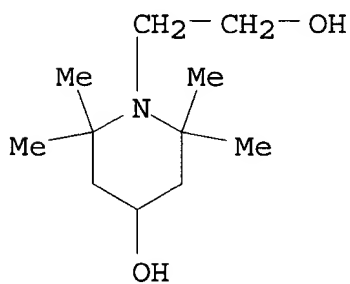
RN 199926-46-0 HCA

CN Butanedioic acid, 2,2-dimethyl-, polymer with 4-hydroxy-2,2,6,6-tetramethyl-1-piperidineethanol (9CI) (CA INDEX NAME)

CM 1

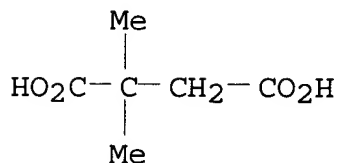
CRN 52722-86-8

CMF C11 H23 N O2



CM 2

CRN 597-43-3
 CMF C6 H10 O4



IC ICM B41M005-00

NCL 428216000

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST transparency ink jet printing **sheet**

IT Collagens, uses
 (hydrolyzates, ammonium salt derivs.; ink-jet printing
sheets for transparency prepn. contg.)

IT Polyesters, uses
 Polyoxyalkylenes, uses
 (ink-jet printing **sheets** for transparency prepn.
 contg.)

IT Polyamines
 Polyamines
 (ionene-; ink-jet printing **sheets** for transparency
 prepn. contg.)

IT Ionene polymers
 Ionene polymers
 (polyamine-; ink-jet printing **sheets** for transparency
 prepn. contg.)

IT 50-21-5, Lactic acid, uses 52-52-8, 1-Amino-1-cyclopentane
 carboxylic acid 52-90-4, L-Cysteine, uses 55-10-7,
 4-Hydroxy-3-methoxy mandelic acid 56-12-2, 4-Aminobutyric acid,
 uses 56-40-6, Glycine, uses 56-41-7, Alanine, uses 56-45-1,
 L-Serine, uses 56-84-8, L-Aspartic acid, uses 56-85-9,
 L-Glutamine, uses 56-86-0, L-Glutamic acid, uses 56-87-1,
 L-Lysine, uses 56-89-3, L-Cystine, uses 56-91-7, 4-Amino methyl
 benzoic acid 57-08-9, 6-Acetamido hexanoic acid 60-00-4,
 Ethylene diamine tetraacetic acid, uses 60-18-4, L-Tyrosine, uses
 60-32-2, 6-Amino caproic acid 61-78-9, 4-Aminohippuric acid
 61-90-5, L-Leucine, uses 63-68-3, Methionine, uses 63-84-3,
 3-(3,4-Dihydroxy phenyl)-alanine 63-91-2, L-Phenylalanine, uses
 65-82-7, N-Acetyl-methionine 67-43-6, Diethylenetriamine
 pentaacetic acid 70-18-8, uses 70-47-3, L-Asparagine, uses
 70-49-5, Mercapto succinic acid 71-00-1, L-Histidine, uses
 72-18-4, Valine, uses 72-19-5, Threonine, uses 73-22-3,
 L-Tryptophan, uses 73-32-5, Isoleucine, uses 74-79-3,
 L-Arginine, uses 76-93-7, Benzoic acid, uses 79-14-1, Glycolic
 acid, uses 81-16-3, 2-Amino-1-naphthalene sulfonic acid 87-69-4,
 uses 88-45-9, 2,5-Diamino benzene sulfonic acid 88-99-3,

1,2-Benzenedicarboxylic acid, uses 89-05-4, 1,2,4,5-Benzene tetracarboxylic acid 89-51-0, Homophthalic acid 89-57-6 90-64-2, Mandelic acid 93-62-9, N-(2-Hydroxyethyl) iminodiacetic acid 98-67-9, 4-Hydroxy benzene sulfonic acid 99-14-9, 1,2,3-Propane tricarboxylic acid 99-16-1, Allantoic acid 99-31-0, 5-Amino isophthalic acid 99-68-3, 2-(Carboxymethyl thio). succinic acid 100-21-0, 1,4-Benzenedicarboxylic acid, uses 102-32-9, Dihydroxy phenylacetic acid 106-14-9, 12-Hydroxystearic acid 107-35-7, 2-Aminoethane sulfonic acid 107-95-9, .beta.-Alanine 110-15-6, Butanedioic acid, uses 110-16-7, 2-Butenedioic acid (Z)-, uses 110-17-8, 2-Butenedioic acid (E)-, uses 110-94-1, Glutaric acid 110-99-6, Diglycolic acid 111-16-0, Pimelic acid 111-20-6, Decanedioic acid, uses 121-34-6, 4-Hydroxy-3-methoxy benzoic acid 121-57-3, Sulfanilic acid 123-99-9, Nonanedioic acid, uses 124-00-5, 2-Dodecenedioic acid 124-04-9, Hexanedioic acid, uses 126-00-1, 4,4-Bis(4-hydroxyphenyl) valeric acid 130-85-8, Pamoic acid 131-54-4, 2,2'-Dihydroxy-4,4'-dimethoxy benzophenone 131-57-7, 2-Hydroxy-4-methoxy benzophenone 136-36-7, Resorcinol mono benzoate 141-82-2, Malonic acid, uses 142-73-4, Imino diacetic acid 144-62-7, Oxalic acid, uses 150-25-4, Bicine 150-39-0, N-(2-Hydroxyethyl) ethylene diamine triacetic acid 156-38-7 156-39-8 300-85-6, 3-Hydroxybutyric acid 306-08-1, 4-Hydroxy-3-methoxy phenyl acetic acid 320-72-9 327-57-1, L-Norleucine 331-39-5, 3,4-Dihydroxy cinnamic acid 372-75-8, Citrulline 487-54-7, 2-Hydroxyhippuric acid 498-21-5, Methyl succinic acid 498-23-7, Citraconic acid 498-24-8, Mesaconic acid 498-36-2, Pentanoic acid, 2-hydroxy-4-methyl- 499-12-7, 1-Propene-1,2,3-tricarboxylic acid 500-44-7, Leucenol 502-50-1, 4-Ketopimelic acid 505-48-6, Suberic acid 505-52-2, 1,11-Undecane dicarboxylic acid 505-54-4, Hexadecanedioic acid 505-95-3, 12-Hydroxydodecanoic acid 506-13-8 510-20-3, Diethyl malonic acid 516-05-2, Methyl malonic acid 517-60-2, Mellitic acid 526-99-8, Mucic acid 530-57-4, 4-Hydroxy-3,5-dimethoxy benzoic acid 530-59-6, 3,5-Dimethoxy-4-hydroxy cinnamic acid 535-87-5, 3,5-Diaminobenzoic acid 537-73-5, 3-Hydroxy-4-methoxy cinnamic acid 542-05-2, 3-Ketoglutaric acid 543-24-8, Acetamido acetic acid 548-51-6, 2-Hydroxy-3-isopropyl-6-methyl benzoic acid 552-63-6, Tropic acid 556-08-1, 4-Acetamido benzoic acid 556-50-3, Glycyl glycine 583-93-7, 2,6-Diamino pimelic acid 594-61-6, 2-Hydroxyisobutyric acid 597-44-4, Citramalic acid 601-75-2, Ethyl malonic acid 605-70-9, 1,4-Naphthalene dicarboxylic acid 612-40-8, 2-Carboxy cinnamic acid 616-91-1, N-Acetyl-cysteine 617-62-9, 2-Methyl glutaric acid 626-51-7, 3-Methyl glutaric acid 627-95-2, 5-Aminovaleric acid hydrochloride 638-23-3 638-32-4, Succinamic acid 645-08-9, 3-Hydroxy-4-methoxy benzoic acid 657-26-1, Lysine dihydrochloride 657-27-2, Lysine monohydrochloride 658-48-0, .alpha.-Methyl tyrosine 660-88-8, 5-Aminovaleric acid 666-99-9, Agaricic acid 672-15-1, Homoserine 681-57-2, 2,2-Dimethyl glutaric acid 693-23-2, Dodecanedioic acid 693-57-2, 12-Amino dodecanoic acid 701-54-2, 4-Amino methyl cyclohexane carboxylic acid 775-01-9, 3,4-Dihydroxy mandelic acid

821-38-5, 1,12-Dodecane dicarboxylic acid 926-39-6, 2-Amino ethyl
hydrogen sulfate 929-17-9, 7-Aminoheptanoic acid 938-97-6,
4-Hydroxy phenyl glycine 943-73-7 1002-57-9, 8-Amino caprylic
acid 1071-23-4, 2-Amino ethyl dihydrogen phosphate 1078-61-1,
3,4-Dihydroxy hydro cinnamic acid 1116-22-9, .gamma.-Glutamyl-
glutamic acid 1119-34-2, Arginine hydrochloride 1132-26-9,
.alpha.-Methyl-phenylalanine 1135-24-6, 4-Hydroxy-3-methoxy
cinnamic acid 1141-38-4, 2,6-Naphthalenedicarboxylic acid
1142-20-7, N-Carbobenzyloxy-alanine 1145-80-8, L-Serine,
N-[(phenylmethoxy)carbonyl]- 1147-43-9, 2-Aminobenzophenone-2'-
carboxylic acid 1149-26-4 1152-61-0 1161-13-3 1164-16-5
1186-65-8 1188-37-0, N-Acetyl-glutamic acid 1197-55-3, 4-Amino
phenyl acetic acid 1218-34-4, N-Acetyl-tryptophan 1234-35-1
1321-11-5, Amino benzoic acid 1482-97-9 1483-01-8 1489-63-0
1679-53-4, 10-Hydroxydecanoic acid 1724-02-3, Glutaconic acid
1843-05-6, 2-Hydroxy-4-(octyloxy)benzophenone 1852-04-6,
Undecanedioic acid 1916-08-1, 3-Hydroxy-4,5-dimethoxy benzoic acid
1946-82-3, N-Acetyl-L-lysine 1953-02-2, N-(2-Mercapto propionyl)
glycine 2018-61-3, N-Acetyl-phenylalanine 2041-14-7,
2-Aminoethyl phosphonic acid 2072-71-1 2121-67-7, 2,4-Dimethyl
glutaric acid 2169-87-1, 2,3-Naphthalene dicarboxylic acid
2212-75-1 2215-21-6, 3,5-Diisopropyl salicylic acid 2418-95-3
2432-99-7, 11-Amino undecanoic acid 2450-31-9, Tetracosane dioic
acid 2549-87-3, 4-Allyloxy-2-hydroxybenzophenone 2592-18-9,
N-(tert-Butoxy carbonyl)threonine 2799-07-7 2835-06-5, 2-Phenyl
glycine 2835-81-6, 2-Aminobutyric acid 2840-04-2,
5-Amino-2-methyl benzoic acid 2921-14-4, Carboxymethoxylamine
hemihydrochloride 2985-59-3, 2-Hydroxy-4-dodecyloxy benzophenone
3058-01-3, 3-Methyl adipic acid 3061-90-3, Alanyl-phenyl alanine
3147-55-5 3184-13-2, Ornithine hydrochloride 3226-65-1
3262-72-4, N-(tert-Butoxy carbonyl)-serine 3401-73-8 3588-17-8
3639-21-2, 2-Ethyl-2 hydroxybutyric acid 3687-18-1,
3-Amino-1-propane sulfonic acid 3695-24-7, 3-Hydroxy-4-methoxy
mandelic acid 3739-30-8, 2-Hydroxy-2-methyl butyric acid
3853-88-1 3864-99-1 4026-18-0, 2-Hydroxy-3-methyl butyric acid
4134-56-9 4165-96-2, 3-Phenyl glutaric acid 4316-23-8, 4-Methyl
phthalic acid 4355-11-7, 1,1-Cyclohexane diacetic acid
4389-53-1, 2-Hydroxy-6-isopropyl-3-methyl benzoic acid 4408-64-4,
Methyl iminodiacetic acid 4408-81-5, 1-2-Diamino
propane-N,N,N',N'-tetraacetic acid 4442-94-8, Hexahydromandelic
acid 4767-03-7 4839-46-7, 3,3-Dimethyl glutaric acid
5337-17-7, 4-Amino phenyl phosphonic acid 5429-56-1, 2-Acetamido
acrylic acid 5445-51-2, 1,1-Cyclobutane dicarboxylic acid
5469-45-4, .alpha.-Acetamido cinnamic acid 5488-16-4,
2,5-Dihydroxy-1,4-benzene diacetic acid 5653-40-7,
2-Amino-4,5-dimethoxy benzoic acid 5893-05-0, n-Trityl glycine
5949-29-1, Citric acid monohydrate 6000-43-7, Glycine
hydrochloride 6003-94-7, Chelidonic acid monohydrate 6020-87-7,
Creatine monohydrate 6027-13-0, Homocysteine 6064-63-7,
2-Hydroxy caproic acid 6600-40-4, L-Norvaline 6915-15-7, Malic
acid 6940-50-7, 4-Bromo mandelic acid 6969-49-9, Octyl
salicylate 7053-88-5, 2-Hydroxy-3-isopropyl benzoic acid

7377-08-4 7412-78-4, Glycyl-glutamic acid 7432-24-8 9000-01-5,
 Gum arabic 9000-07-1, Carrageenan 9000-30-0D, Guar,
cationic 9000-36-6, Karaya gum 9002-18-0, Agar-agar
 (ink-jet printing **sheets** for transparency prepn.
 contg.)

IT 9002-89-5, Poly(vinyl alcohol) 9002-89-5D, Poly(vinyl alcohol),
 alkoxylated 9003-05-8, Poly(acrylamide) 9003-06-9,
 Acrylamide-acrylic acid copolymer 9003-11-6 9003-39-8,
 Poly(vinyl pyrrolidone) 9004-32-4, Sodium carboxymethyl cellulose
 9004-58-4, Ethyl hydroxyethyl cellulose 9004-62-0, Hydroxyethyl
 cellulose 9004-64-2, Hydroxypropyl cellulose 9004-65-3,
 Hydroxypropyl methyl cellulose 9004-67-5, Methyl cellulose
 9005-22-5, Sodium cellulose sulfate 9005-25-8, Starch, uses
 9012-76-4, Chitosan 9013-34-7, Diethylaminoethyl cellulose
 9015-11-6, Benzyl cellulose 9015-73-0, Diethyl aminoethyl dextran
 9032-42-2, Hydroxyethyl methyl cellulose 9033-69-6, Amino
 deoxycellulose 9036-94-6, Chlorodeoxycellulose 9041-56-9,
 Hydroxybutyl methyl cellulose 9044-05-7, Carboxymethyl dextran
 9064-90-8 9088-04-4, Sodium carboxymethylhydroxyethyl cellulose
 10044-27-6 10502-44-0, 4-Methoxy mandelic acid 11138-66-2,
 Xanthan 13073-35-3, Ethionine 13138-33-5, 3-Aminopropyl
 phosphonic acid 13139-16-7, N-(tert-Butoxy carbonyl)-isoleucine
 13545-04-5, 2,3-Dimethyl succinic acid 13734-28-6 13734-34-4,
 N-(tert-Butoxy carbonyl)-phenylalanine 13734-41-3 13881-91-9,
 Amino methane sulfonic acid 13927-77-0, Nickel
 dibutyldithiocarbamate 14857-77-3 15151-51-6, 3-Amino benzoic
 acid hydrochloride 15537-71-0, N-Acetyl-penicillamine 15985-39-4
 16323-43-6, 1,4-Phenylene diacrylic acid 16432-81-8,
 2-(4-Benzoyl-3-hydroxyphenoxy)ethylacrylate 16555-77-4,
 .alpha.-Hydroxy hippuric acid 16713-66-9, 1,1-Cyclopentanediacetic
 acid 17994-25-1, 1-Hydroxy-1-cyclopropane carboxylic acid
 19360-67-9, 4-Carboxy phenoxy acetic acid 21339-55-9 23289-62-5
 23537-25-9 24969-10-6, Epichlorohydrin-ethylene oxide copolymer
 25086-29-7 25086-89-9, Vinyl pyrrolidone-vinyl acetate copolymer
 25322-68-3 25357-95-3, 1,3,5-Cyclohexane tricarboxylic acid
 25429-38-3, Hydroxy cinnamic acid **25805-17-8**,
 Poly(2-ethyl-2-oxazoline) 25832-09-1 26106-63-8,
 Tetrahydrofuran-2,3,4,5-tetracarboxylic acid 26239-55-4,
 N-(2-Acetamido) imino diacetic acid 26336-38-9, Poly(vinylamine).
 26793-34-0, Poly(N,N-dimethyl acrylamide) 27138-57-4, Dihydroxy
 benzoic acid 27676-62-6 29593-08-6 29656-58-4, Hydroxy benzoic
 acid **29690-74-2**, Poly(vinyl phosphate) 29963-76-6,
 Poly[2-(4-benzoyl-3-hydroxyphenoxy)ethylacrylate] 30947-30-9
 31290-91-2, Cyclohexane dicarboxylic acid 33697-81-3,
 3-Chloro-4-hydroxy phenyl acetic acid 33906-30-8, 2-Hydrazino
 benzoic acid hydrochloride 37293-51-9, Amino dextran 37337-45-4
 39145-52-3 39454-79-0, Carboxymethyl hydroxypropyl guar
 39537-36-5 39630-46-1, Glycyl tyrosine dihydrate 41372-08-1
 50730-79-5 50852-24-9, Dihydroxy naphthoic acid 51331-09-0,
 Hydroxypropyl hydroxyethyl cellulose 52519-63-8, Carboxymethyl
 chitin 53159-92-5, 1,2,3,4-Cyclobutane tetracarboxylic acid
 54057-95-3 54351-50-7 56271-99-9, .gamma.-Carboxy glutamic acid

58817-05-3 62146-88-7 64022-61-3 65259-81-6 65427-54-5,
 2,4-Diaminobutyric acid dihydrochloride 67648-61-7, 2-(4-Hydroxy
 phenoxy) propionic acid 67845-93-6, Hexadecyl 3,5-di-tert-butyl-4-
 hydroxy-benzoate 68399-79-1 68781-13-5, 1-Amino-1-cyclopropane
 carboxylic acid hydrochloride 69676-59-1 70321-86-7 79720-19-7
 80866-86-0 80997-87-1 **82451-48-7** 88063-74-5
 91613-20-6 91613-21-7 96352-14-6, Cellulose, phenyl ether
 96436-87-2 103597-45-1 106917-30-0 106917-31-1 109191-31-3,
 N-(2-Acetamido) 2-amino ethane sulfonic acid 116783-26-7
 122269-49-2, Ethylene oxide-isoprene block copolymer 126115-44-4
 128161-59-1 134235-86-2 139011-48-6 145332-37-2 184901-84-6
 196696-82-9 196696-83-0 196696-84-1 199926-19-7 199926-21-1
 199926-27-7 199926-30-2 199926-32-4 199926-33-5 199926-34-6
 199926-35-7 199926-37-9 199926-38-0 199926-39-1 199926-40-4
 199926-41-5 199926-42-6 199926-43-7 199926-44-8 199926-45-9
199926-46-0 199926-47-1
 (ink-jet printing **sheets** for transparency prepn.
 contg.)

L56 ANSWER 10 OF 19 HCA COPYRIGHT 2002 ACS

127:126348 Hair compositions containing combination of a polyampholyte
polymer and a **cationic polymer**.

Cauwet-Martin, Daniele; Lion, Bertrand; Mondet, Jean (L'Oreal, Fr.;
 Cauwet-Martin, Daniele; Lion, Bertrand; Mondet, Jean). PCT Int.
 Appl. WO 9723193 A1 19970703, 32 pp. DESIGNATED STATES: W: AL, AM,
 AU, AZ, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, HU, IL, IS, JP, KE,
 KG, KP, KR, KZ, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ,
 PL, RO, RU, SD, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN; RW:
 AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR,
 IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (French).
 CODEN: PIXXD2. APPLICATION: WO 1996-FR1831 19961119. PRIORITY: FR
 1995-15290 19951221.

AB To a compn. for the treatment of keratinic materials, particularly
 human hair, contg. in a cosmetically and/or dermatol. acceptable aq.
 medium at least (1) a polyampholyte polymer comprised of at least
 one ethylenically unsatd. monomer and comprising in the chain or
 sideways of the chain equimolar or substantially equimolar
 quantities of neg. charges and pos. charges; said polymer is water
 insol. at a concn. higher than or equal to 1% by wt. at 20.degree.;
 (2) a **cationic polymer** of which the cationic
 charge d. is lower than or equal to 4 meq/g.
 They are used as capillary products to be rinsed for hair care, hair
 washing and or hair combing. They have a good hair dressing effect
 and good wet hair combing out properties. Sodium styrene sulfonate
 49.8, an aq. soln. of 78.9% trimethylammonium Et methacrylate
 chloride 63.63, water 300, and potassium persulfate 2 g were stirred
 under N and heated at 72.degree. for 24 h, the polymer thus obtained
 was then sepd., washed and dried. A shampoo had sodium lauryl ether
 sulfate 24, 32% cocoylbetain soln. 8, above polymer 1, NaCl 2, 8%
 soln. of dimethyldiallylammonium chloride-acrylamide copolymer 1,
 preservatives, perfumes and water q.s. 100 g.

IT **31324-84-2P 38812-35-0P 41488-70-4P**

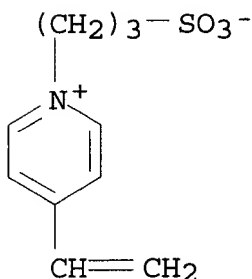
65205-78-9P 65205-79-0P 67553-83-7P
 89559-71-7P 89559-72-8P 98715-54-9P
 117829-14-8P 130764-80-6P 192820-61-4P
 192820-63-6P 192820-66-9P 192820-73-8P

(hair compns. contg. combination of polyampholyte **polymer**
 and **cationic polymer**)

RN 31324-84-2 HCA
 CN Pyridinium, 4-ethenyl-1-(3-sulfopropyl)-, inner salt, homopolymer
 (9CI) (CA INDEX NAME)

CM 1

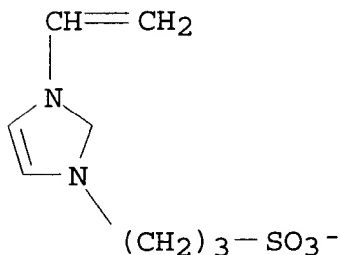
CRN 4271-44-7
 CMF C10 H13 N O3 S



RN 38812-35-0 HCA
 CN 1H-Imidazolium, 1-ethenyl-3-(3-sulfopropyl)-, inner salt,
 homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 46348-09-8
 CMF C8 H12 N2 O3 S

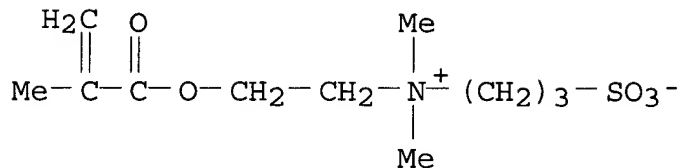


*** FRAGMENT DIAGRAM IS INCOMPLETE ***

RN 41488-70-4 HCA
 CN 1-Propanaminium, N,N-dimethyl-N-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-3-sulfo-, inner salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

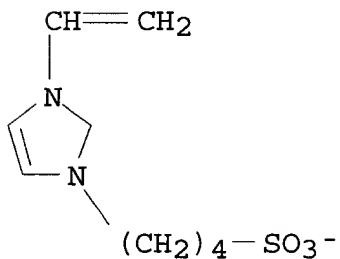
CRN 3637-26-1
CMF C11 H21 N O5 S



RN 65205-78-9 HCA
CN 1H-Imidazolium, 1-ethenyl-3-(4-sulfobutyl)-, inner salt, homopolymer
(9CI) (CA INDEX NAME)

CM 1

CRN 65180-31-6
CMF C9 H14 N2 O3 S

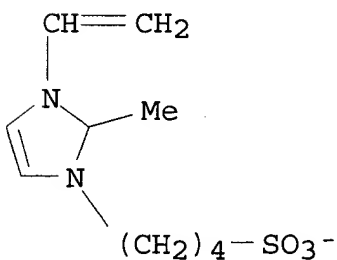


*** FRAGMENT DIAGRAM IS INCOMPLETE ***

RN 65205-79-0 HCA
CN 1H-Imidazolium, 1-ethenyl-2-methyl-3-(4-sulfobutyl)-, inner salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 65180-32-7
CMF C10 H16 N2 O3 S



*** FRAGMENT DIAGRAM IS INCOMPLETE ***

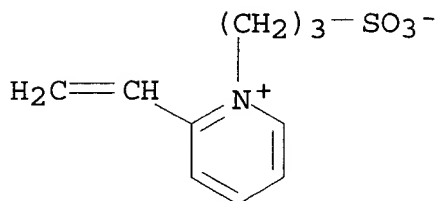
RN 67553-83-7 HCA

CN Pyridinium, 2-ethenyl-1-(3-sulfopropyl)-, inner salt, homopolymer
(9CI) (CA INDEX NAME)

CM 1

CRN 6613-64-5

CMF C10 H13 N O3 S



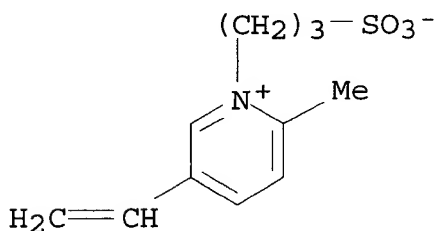
RN 89559-71-7 HCA

CN Pyridinium, 5-ethenyl-2-methyl-1-(3-sulfopropyl)-, inner salt,
homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 4271-42-5

CMF C11 H15 N O3 S



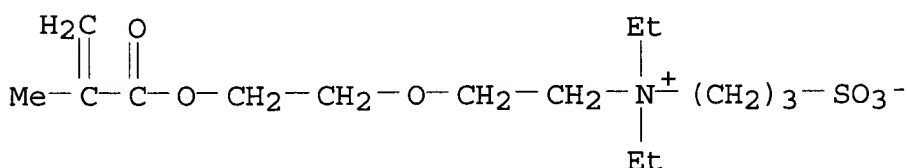
RN 89559-72-8 HCA

CN 1-Propanaminium, N,N-diethyl-N-[2-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]ethyl]-3-sulfo-, inner salt, homopolymer (9CI)
(CA INDEX NAME)

CM 1

CRN 89503-60-6

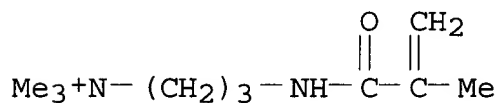
CMF C15 H29 N O6 S



RN 98715-54-9 HCA
 CN 1-Propanaminium, N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)amino]-, chloride, polymer with sodium ethenylbenzenesulfonate (9CI) (CA INDEX NAME)

CM 1

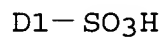
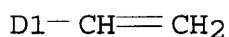
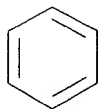
CRN 51410-72-1
 CMF C10 H21 N2 O . Cl



● Cl⁻

CM 2

CRN 27457-28-9
 CMF C8 H8 O3 S . Na
 CCI IDS

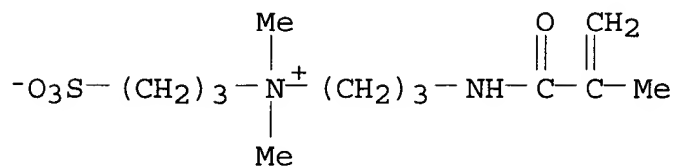


● Na

RN 117829-14-8 HCA
 CN 1-Propanaminium, N,N-dimethyl-N-[3-[(2-methyl-1-oxo-2-propenyl)amino]propyl]-3-sulfo-, inner salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

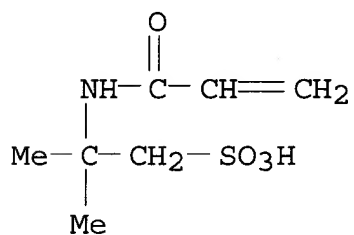
CRN 5205-95-8
CMF C12 H24 N2 O4 S



RN 130764-80-6 HCA
CN Ethanaminium, N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-, chloride, polymer with 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid (9CI) (CA INDEX NAME)

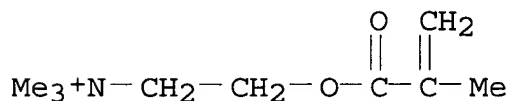
CM 1

CRN 15214-89-8
CMF C7 H13 N O4 S



CM 2

CRN 5039-78-1
CMF C9 H18 N O2 . Cl

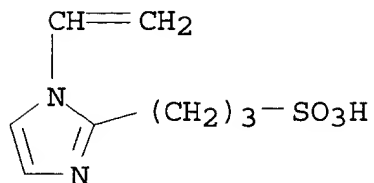


● Cl⁻

RN 192820-61-4 HCA
CN 1H-Imidazole-2-propanesulfonic acid, 1-ethenyl-, homopolymer (9CI)
(CA INDEX NAME)

CM 1

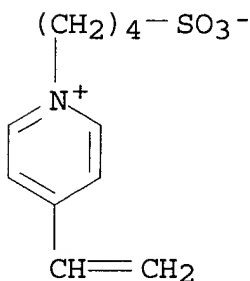
CRN 192820-60-3
CMF C8 H12 N2 O3 S



RN 192820-63-6 HCA
CN Pyridinium, 4-ethenyl-1-(4-sulfobutyl)-, inner salt, homopolymer
(9CI) (CA INDEX NAME)

CM 1

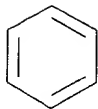
CRN 33900-73-1
CMF C11 H15 N O3 S



RN 192820-66-9 HCA
CN Ethanaminium, N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-, chloride, polymer with sodium ethenylbenzenesulfonate (9CI) (CA INDEX NAME)

CM 1

CRN 27457-28-9
CMF C8 H8 O3 S . Na
CCI IDS



D1-CH=CH₂

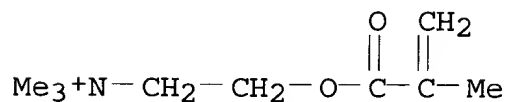
D1-SO₃H

● Na

CM 2

CRN 5039-78-1

CMF C9 H18 N O2 . Cl



● Cl⁻

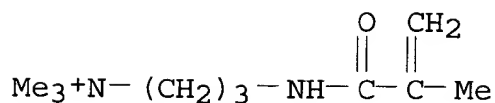
RN 192820-73-8 HCA

CN 1-Propanaminium, N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)amino]-, chloride, polymer with 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid monosodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 51410-72-1

CMF C10 H21 N2 O . Cl

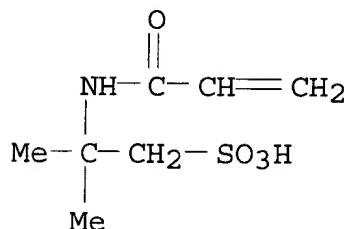


● Cl⁻

CM 2

CRN 5165-97-9

CMF C7 H13 N O4 S . Na



● Na

IC ICM A61K007-06
 CC 62-3 (Essential Oils and Cosmetics)
 Section cross-reference(s): 35, 38
 ST hair compn polyampholyte **cationic polymer**;
 shampoo styrene **sulfonate** methacrylate **copolymer**
 IT Alcohols, biological studies
 (C16-18, ethoxylated; hair compns. contg. combination of
 polyampholyte **polymer** and **cationic**
polymer)
 IT Surfactants
 (amphoteric; hair compns. contg. combination of polyampholyte
polymer and **cationic polymer**)
 IT Surfactants
 (anionic; hair compns. contg. combination of polyampholyte
polymer and **cationic polymer**)
 IT Surfactants
 (cationic; hair compns. contg. combination of polyampholyte
polymer and **cationic polymer**)
 IT Shampoos
 Surfactants
 (hair compns. contg. combination of polyampholyte **polymer**)

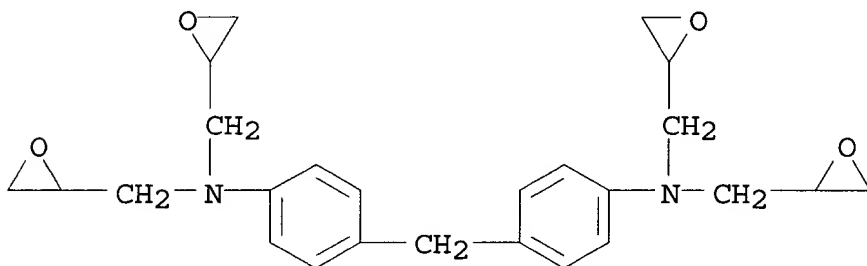
- and **cationic polymer**)
- IT Polymers, biological studies
(hair compns. contg. combination of polyampholyte **polymer**
and **cationic polymer**)
- IT Hair preparations
(lotions; hair compns. contg. combination of polyampholyte
polymer and **cationic polymer**)
- IT Surfactants
(nonionic; hair compns. contg. combination of polyampholyte
polymer and **cationic polymer**)
- IT Surfactants
(zwitterionic; hair compns. contg. combination of polyampholyte
polymer and **cationic polymer**)
- IT 107-43-7D, Betaine, cocoacyl derivs. 112-02-7, Barquat ct29
9000-30-0, Guar **gum** 9004-82-4 11138-66-2, Xanthan
gum 17301-53-0, Behenyl trimethyl ammonium chloride
26590-05-6, Dimethyldiallylammonium chloride-acrylamide copolymer
74444-08-9
(hair compns. contg. combination of polyampholyte **polymer**
and **cationic polymer**)
- IT 9004-34-6DP, Cellulose, derivs., biological studies 9005-25-8DP,
Starch, derivs., biological studies **31324-84-2P**
38812-35-0P 41488-70-4P 65205-78-9P
65205-79-0P 67553-83-7P 89559-71-7P
89559-72-8P 98715-54-9P 117829-14-8P
130764-80-6P 192820-61-4P 192820-63-6P
192820-66-9P 192820-73-8P
(hair compns. contg. combination of polyampholyte **polymer**
and **cationic polymer**)
- L56 ANSWER 11 OF 19 HCA COPYRIGHT 2002 ACS
- 122:163632 **Coating** of fiber-reinforced thermosetting
resin during molding process. Morishita, Natsuki; Tsuji, Toshimitsu
(Sekisui Chemical Co Ltd, Japan). Jpn. Kokai Tokkyo Koho JP
06271816 A2 19940927 Heisei, 18 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 1993-63773 19930323.
- AB The process is carried out by molding of a fiber-reinforced
thermosetting resin and coating with another thermosetting resin and
curing in a mold where the resin contains ether unsatd. carboxylic
acids, unsatd. sulfonic acids, and/or unsatd. phosphoric acids or
unsatd. phosphoric acids, polyisocyanates, polyamines, and/or
glycidyl epoxy compds. Molding a glass fiber-reinforced isophthalic
acid-maleic acid-propylene glycol copolymer (I) contg. polystyrene,
styrene, methacrylic acid, and CaCO₃, covering with a mixt. of I
contg. styrene, mono(2-acryloyloxyethyl) dihydrodienephosphate, a
curing agent and CaCO₃, and curing in the mold gave coated moldings
with good **adhesion**.
- IT **161323-11-1**
(glass **fiber**-reinforced; **coating** of
fiber-reinforced thermosetting resin during molding
process)
- RN 161323-11-1 HCA

CN 1,3-Benzenedicarboxylic acid, polymer with (2Z)-2-butenedioic acid, ethenylbenzene, N,N'-(methylenedi-4,1-phenylene)bis[N-(oxiranylmethyl)oxiranemethanamine] and 1,2-propanediol (9CI) (CA INDEX NAME)

CM 1

CRN 28768-32-3

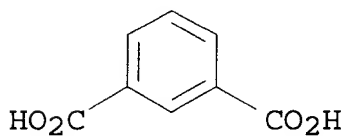
CMF C25 H30 N2 O4



CM 2

CRN 121-91-5

CMF C8 H6 O4

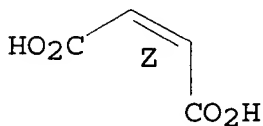


CM 3

CRN 110-16-7

CMF C4 H4 O4

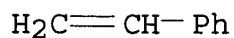
Double bond geometry as shown.



CM 4

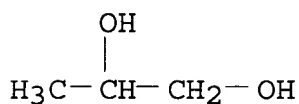
CRN 100-42-5

CMF C8 H8



CM 5

CRN 57-55-6
CMF C3 H8 O2



IT 150857-20-8 161322-99-2 161323-03-1
161323-05-3

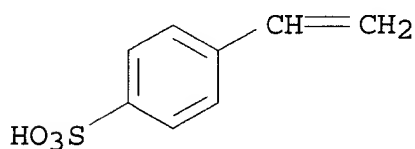
(surface **coating**; **coating** of fiber
-reinforced thermosetting resin during molding process)

RN 150857-20-8 HCA

CN 1,3-Benzenedicarboxylic acid, polymer with (2Z)-2-butenedioic acid,
ethenylbenzene, potassium 4-ethenylbenzenesulfonate and
1,2-propanediol (9CI) (CA INDEX NAME)

CM 1

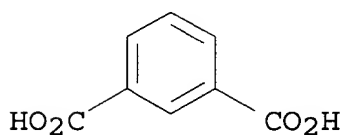
CRN 4551-90-0
CMF C8 H8 O3 S . K



● K

CM 2

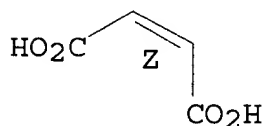
CRN 121-91-5
CMF C8 H6 O4



CM 3

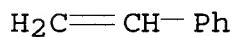
CRN 110-16-7
CMF C4 H4 O4

Double bond geometry as shown.



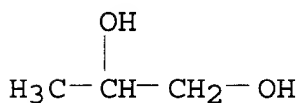
CM 4

CRN 100-42-5
CMF C8 H8



CM 5

CRN 57-55-6
CMF C3 H8 O2

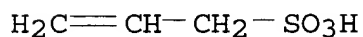


RN 161322-99-2 HCA

CN 1,3-Benzenedicarboxylic acid, polymer with (2Z)-2-butenedioic acid, ethenylbenzene, 1,2-propanediol and 2-propene-1-sulfonic acid (9CI)
(CA INDEX NAME)

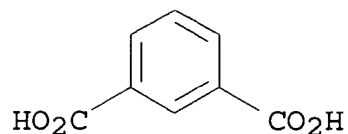
CM 1

CRN 1606-80-0
CMF C3 H6 O3 S



CM 2

CRN 121-91-5
CMF C8 H6 O4

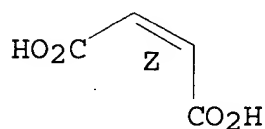


CM 3

CRN 110-16-7

CMF C4 H4 O4

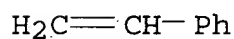
Double bond geometry as shown.



CM 4

CRN 100-42-5

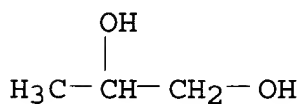
CMF C8 H8



CM 5

CRN 57-55-6

CMF C3 H8 O2



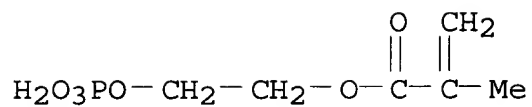
RN 161323-03-1 HCA

CN 1,3-Benzenedicarboxylic acid, polymer with (2Z)-2-butenedioic acid, ethenylbenzene, 2-(phosphonooxy)ethyl 2-methyl-2-propenoate and 1,2-propanediol (9CI) (CA INDEX NAME)

CM 1

CRN 24599-21-1

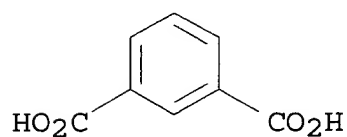
CMF C6 H11 O6 P



CM 2

CRN 121-91-5

CMF C8 H6 O4

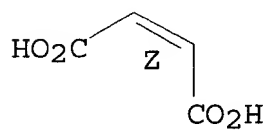


CM 3

CRN 110-16-7

CMF C4 H4 O4

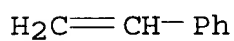
Double bond geometry as shown.



CM 4

CRN 100-42-5

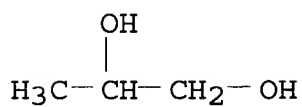
CMF C8 H8



CM 5

CRN 57-55-6

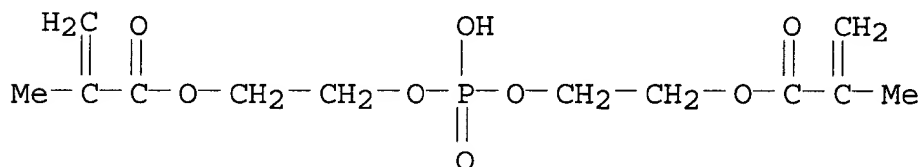
CMF C3 H8 O2



RN 161323-05-3 HCA
 CN 1,3-Benzenedicarboxylic acid, polymer with (2Z)-2-butenedioic acid, ethenylbenzene, phosphinicobis(oxy-2,1-ethanediyl) bis(2-methyl-2-propenoate), potassium 4-ethenylbenzenesulfonate and 1,2-propanediol (9CI) (CA INDEX NAME)

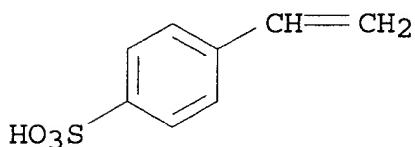
CM 1

CRN 32435-46-4
 CMF C12 H19 O8 P



CM 2

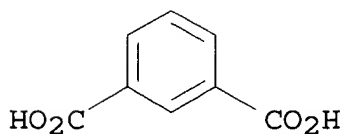
CRN 4551-90-0
 CMF C8 H8 O3 S . K



● K

CM 3

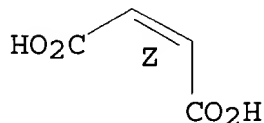
CRN 121-91-5
 CMF C8 H6 O4



CM 4

CRN 110-16-7
 CMF C4 H4 O4

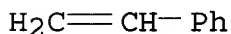
Double bond geometry as shown.



CM 5

CRN 100-42-5

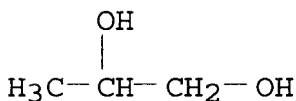
CMF C8 H8



CM 6

CRN 57-55-6

CMF C3 H8 O2



IC ICM C09D201-00
ICS B29C043-20; C08L101-00
ICI B29K101-10, B29K105-06
CC 42-8 (Coatings, Inks, and Related Products)
Section cross-reference(s): 37
ST coating reinforced polyester molding **adhesion**; maleic acid
polyester coating **adhesion**; molding coating thermosetting
polyester; epoxy polyester coat molding; polyisocyanate polyester
coat molding; acryloylphosphate copolymer coat **adhesion**
IT Coating materials
Molding of plastics and rubbers
(**coating** of **fiber**-reinforced thermosetting
resin during molding process)
IT Plastics, reinforced
Polyesters, uses
(**coating** of **fiber**-reinforced thermosetting
resin during molding process)
IT Polyesters, uses
(epoxy, **coating** of **fiber**-reinforced
thermosetting resin during molding process)
IT Polyesters, uses
(isocyanate-terminated, **coating** of **fiber**
-reinforced thermosetting resin during molding process)

IT Polyesters, uses
 (phosphate group-contg., **coating** of **fiber**
 -reinforced thermosetting resin during molding process)

IT Epoxy resins, uses
 (polyester-, **coating** of **fiber**-reinforced
 thermosetting resin during molding process)

IT 9003-53-6, Polystyrene 161323-06-4 161323-07-5 161323-08-6
 161323-09-7 161323-10-0 **161323-11-1** 161323-12-2
 (glass **fiber**-reinforced; **coating** of
fiber-reinforced thermosetting resin during molding
 process)

IT **150857-20-8** 155139-59-6 161322-98-1 **161322-99-2**
161323-03-1 161323-04-2 **161323-05-3**
 (surface **coating**; **coating** of **fiber**
 -reinforced thermosetting resin during molding process)

L56 ANSWER 12 OF 19 HCA COPYRIGHT 2002 ACS

119:282348 Recording **sheet**. Malhotra, Shadi L.; Turner,
 Josephine P.; Bryant, Brent S.; Jones, Arthur Y. (Xerox Corp., USA).
 U.S. US 5212008 A 19930518, 12 pp. (English). CODEN: USXXAM.
 APPLICATION: US 1992-861668 19920401.

AB Disclosed is a recording **sheet** suitable for use in copying
 and printing comprises a substrate, a first coating in contact with
 the substrate comprising a crosslinking agent selected from the
 group consisting of hexamethoxymethyl melamine, methylated
 melamine-formaldehyde, methylated urea-formaldehyde,
cationic urea-formaldehyde, **cationic**
 polyamine-epichlorohydrin, glyoxal-urea resin, and the like, a
 catalyst, and a polymeric material capable of being crosslinked by
 the crosslinking agent and selected from the group consisting of
 polysaccharides having .gtoreq.1 hydroxy, carboxy, sulfate, amine,
 or amino group, polysaccharide gums, poly (alkylene oxides), vinyl
 polymers, and mixts. thereof and a second coating in contact with
 the first coating comprises a **binder** and a material
 selected from the group consisting of fatty imidazolines,
 ethosulfate quaternary compds., dialkyl di-Me methosulfate
 quaternary compds., alkoxylated fatty quaternary compds., amine
 oxides, amine ethoxylates, imidazoline quaternary compds., alkyl
 benzyl di-Me quaternary compds., poly(epiamines), and mixts.
 thereof.

IT **9002-98-6**, Poly(aziridine) **25610-84-8**
25988-97-0 **27119-07-9**, Poly(2-acrylamido-2-
 methylpropanesulfonic acid) **29690-74-2**, Poly(vinyl
 phosphate)
 (transparent receptors contg., for ink-jet printing and
 electrophotog. materials)

RN 9002-98-6 HCA

CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 151-56-4

CMF C2 H5 N



RN 25610-84-8 HCA
CN Aziridine, polymer with (chloromethyl)oxirane (9CI) (CA INDEX NAME)

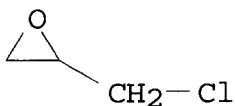
CM 1

CRN 151-56-4
CMF C2 H5 N



CM 2

CRN 106-89-8
CMF C3 H5 Cl O



RN 25988-97-0 HCA
CN Methanamine, N-methyl-, polymer with (chloromethyl)oxirane (9CI)
(CA INDEX NAME)

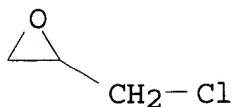
CM 1

CRN 124-40-3
CMF C2 H7 N

 $\text{H}_3\text{C}-\text{NH}-\text{CH}_3$

CM 2

CRN 106-89-8
CMF C3 H5 Cl O

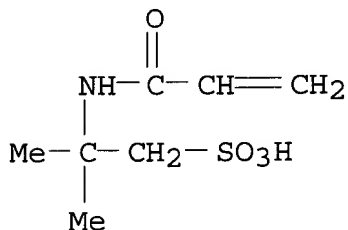


RN 27119-07-9 HCA
 CN 1-Propanesulfonic acid, 2-methyl-2-[(1-oxo-2-propenyl)amino]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 15214-89-8

CMF C7 H13 N O4 S

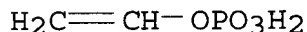


RN 29690-74-2 HCA
 CN Phosphoric acid, monoethenyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 36885-49-1

CMF C2 H5 O4 P



IC ICM B41M005-00

ICS B32B027-08

NCL 428216000

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 111-30-8, Pentanedia 122-18-9, Hexadecylbenzyltrimethylammonium chloride 122-19-0, Stearylbenzyltrimethylammonium chloride 139-07-1, Laurylbenzyltrimethylammonium chloride 139-08-2 1643-20-5, Lauryldimethylamine oxide 3089-11-0, Hexamethoxymethylmelamine 9000-01-5, Gum arabic 9000-07-1, Carrageenan gum 9000-36-6, Karaya gum 9002-89-5, Poly(vinyl alcohol) 9002-98-6, Poly(aziridine) 9003-01-4, Poly(acrylic acid) 9003-05-8, Poly(acrylamide) 9003-06-9, Acrylamide-acrylic acid copolymer 9003-20-7, Poly(vinyl acetate) 9003-39-8, Poly(vinyl pyrrolidone) 9003-55-8, Styrene-butadiene

copolymer 9004-32-4, Sodium carboxymethyl cellulose 9004-38-0, Cellulose acetate hydrogen phthalate 9004-57-3, Ethyl cellulose 9004-58-4, Ethylhydroxyethyl cellulose 9004-62-0, Hydroxyethyl cellulose 9004-64-2, Hydroxypropyl cellulose 9004-65-3 9004-67-5, Methylcellulose 9005-22-5, Sodium cellulose sulfate 9005-27-0, Hydroxyethyl starch 9012-09-3, Cellulose triacetate 9012-76-4, Chitosan 9013-34-7, Diethylaminoethyl cellulose 9015-73-0, Diethylaminoethyl dextran 9032-42-2, Hydroxyethylmethyl cellulose 9041-56-9, Hydroxybutylmethyl cellulose 9044-05-7, Carboxymethyl dextran 9049-76-7, Hydroxypropyl starch 9050-31-1, Hydroxypropylmethyl cellulose phthalate 9086-85-5, Poly(hydroxypropyl methacrylate) 9088-04-4, Sodium carboxymethylhydroxyethyl cellulose 11138-66-2, Xanthan gum 24938-67-8, Poly(2,6-dimethyl-p-phenylene oxide) 25014-31-7, Poly(.alpha.-methylstyrene) 25086-29-7 25086-89-9, Vinylpyrrolidone-vinylacetate copolymer 25190-06-1 25213-24-5, Vinyl alcohol-vinyl acetate copolymer 25322-68-3 25322-69-4, Poly(propylene oxide) 25587-82-0, Poly(2,4,6-tribromostyrene) 25610-84-8 25988-97-0 26022-14-0, Poly(2-hydroxyethyl acrylate) 26336-38-9, Poly(vinylamine) 26793-34-0, Poly(N,N-dimethylacrylamide) 27119-07-9, Poly(2-acrylamido-2-methylpropanesulfonic acid) 29690-74-2, Poly(vinyl phosphate) 30581-59-0 37293-51-9, Aminodextran 39454-79-0, Carboxymethyl hydroxypropyl guar 51023-21-3, Oleylhydroxyethylimidazoline 51331-09-0, Hydroxypropylhydroxyethyl cellulose 53037-34-6, Glyoxal-urea copolymer 54351-50-7, Hydroxypropyltrimethylammonium chloride hydroxyethyl cellulose 62501-03-5 72779-48-7, Hydroxyethyl cellulose methacrylate 74866-86-7D, coco alkyl deriv. 93580-55-3 111483-45-5, Hydroxyethyl cellulose acrylate 113277-70-6, Poly(N,N-dimethyl-3,5-dimethylenepiperidinium chloride) 146168-57-2 151626-65-2 (transparent receptors contg., for ink-jet printing and electrophotog. materials)

L56 ANSWER 13 OF 19 HCA COPYRIGHT 2002 ACS

103:132466 Pressure-sensitive recording **sheets**. (Jujo Paper Co., Ltd., Japan; Nippon Zeon Co., Ltd.). Jpn. Kokai Tokkyo Koho JP 60097886 A2 19850531 Showa, 9 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1983-204897 19831102.

AB Pressure-sensitive recording **sheets** have coated layer contg. microcapsules, having capsule wall composed of amino-aldehyde resin, polyurethane, or polyurea, and also contg. a copolymer latex as **binder** composed of 20-80% aliph. conjugated diolefinic monomer, 10-75% arom. vinylic monomer, 5-30% ethylenic unsatd. acid monomer, 0-30% ethylenically unsatd. nitrile monomer, and 0-65% of copolymerizable olefinic monomer. Typical materials for the capsule wall are urea-HCHO and/or melamine-HCHO resins. The **sheets** have high stability to abrasion, external pressure, temp. and humidity, and are storage stable. The **binder** provides highly concd. and low viscosity coating soln. that forms layers having a tough, waterproof surface. Thus, a microcapsule dispersion was prep'd. by the addn. of 10 parts of urea and 1.4 parts of

resorcinol to a stirred soln. of 30 parts of H₂O-sol, **anionic** copolymer (acrylic acid 70, styrenesulfonic acid 15, and hydroxyethyl methacrylate 15 parts) in 115 parts H₂O, pH adjustment to 3.4 by NaOH, and dispersing, in the soln., a soln. of 5.4 parts Crystal Violet lactone and 1.3 parts of benzoyl leucomethylene blue in 170 parts of 1:1 mixt. of phenylxylylethane (Nisseki Hisol SAS) and diisopropylnaphthalene (KMC-113). Addn. of 26 parts of 37% HCHO and reaction at 55.degree. for 2 h gave microcapsules having diam. 4 .mu.m; 100 parts of the dispersion was mixed with 38 parts of wheat starch and 12 parts of latex of 35:6:59 1,3-butadiene-methacrylic acid-styrene copolymer, and was coated on plain paper (4 g/m²). Loss of brightness of nonimage areas by type-writing, pressing, abrasion, and heating was much smaller than with the control material using com. **binder** material instead of the claimed copolymer.

IT 9003-08-1 9011-05-6 98419-50-2

(in microencapsulation of pressure-copying material)

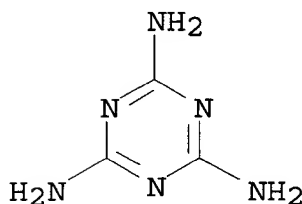
RN 9003-08-1 HCA

CN 1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde (9CI) (CA INDEX NAME)

CM 1

CRN 108-78-1

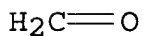
CMF C3 H6 N6



CM 2

CRN 50-00-0

CMF C H2 O



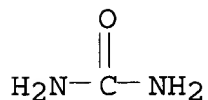
RN 9011-05-6 HCA

CN Urea, polymer with formaldehyde (9CI) (CA INDEX NAME)

CM 1

CRN 57-13-6

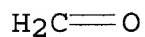
CMF C H4 N2 O



CM 2

CRN 50-00-0

CMF C H2 O



RN 98419-50-2 HCA

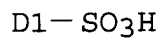
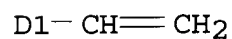
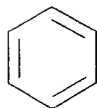
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with
ethenylbenzenesulfonic acid and 2-propenoic acid (9CI) (CA INDEX
NAME)

CM 1

CRN 26914-43-2

CMF C8 H8 O3 S

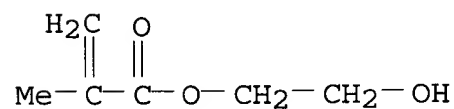
CCI IDS



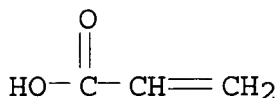
CM 2

CRN 868-77-9

CMF C6 H10 O3



CM 3

CRN 79-10-7
CMF C3 H4 O2

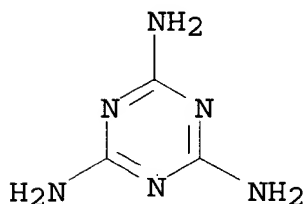
- IC ICM B41M005-12
ICS B41M005-12
- CC 74-11 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST recording **sheet** pressure microcapsule **binder**;
polymer **binder** pressure copying **sheet**
- IT Copying paper
(pressure-sensitive, microcapsules and polymer **binder**
for, for reduced loss of brightness of nonimage areas)
- IT 57-13-6, uses and miscellaneous 108-46-3, properties
9003-08-1 9011-05-6 98419-50-2
(in microencapsulation of pressure-copying material)
- L56 ANSWER 14 OF 19 HCA COPYRIGHT 2002 ACS
102:87680 Electrophotographic sheet for offset printing. (Mitsubishi Paper Mills, Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 59149372 A2 19840827 Showa, 4 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1983-24149 19830216.
- AB The claimed electrophotog. sheet used as the substrate for offset printing plate is coated on the reverse side with a compn. contg. electroconductive fiber. The sheet is conveniently used in an automatic printing process in which the sheet is immersed in desensitizing soln., because the claimed backcoat prevents excessive curling due to the immersion without increasing the water permeability of the reverse side of the sheet. Thus, a water-resistant paper support was undercoated with a compn. contg. sericite-based pigment 200, 48% carboxyl-modified styrene-butadiene rubber latex 125, Sumirez Resin 613 (Sumitomo Durez Co. Ltd.; melamine resin initial condensate) 4, poly(styrenesulfonic acid) Na salt 4, catalyst (Sumitex Accelerator ACX, Sumitomo Chem. Co.). Then a backcoat layer contg. 40% dispersion of conductive acrylic resin (Thunderlon S-N, Nippon Sanmo Senshoku K.K.) 30, sericite-based pigment 200, carboxyl-modified styrene-butadiene latex 120, Sumirez Resin 613 4, and oxidized starch (10%) 50 wt. parts was coated on the reverse side. A photoconductive layer contg. ZnO, acrylic **binder**, and Rose Bengal was formed on the undercoat layer, without cracking or pinhole formation. After seasoning, the sheet was made into a printing sheet which was desensitized. Only negligible curling was obsd.
- IT **9003-08-1 9080-79-9**
(anticurling electrophotog. sheet coating compn. contg., for printing plate prepn.)

RN 9003-08-1 HCA
CN 1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde (9CI) (CA
INDEX NAME)

CM 1

CRN 108-78-1

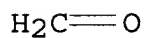
CMF C3 H6 N6



CM 2

CRN 50-00-0

CMF C H2 O



RN 9080-79-9 HCA
CN Benzenesulfonic acid, ethenyl-, homopolymer, sodium salt (9CI) (CA
INDEX NAME)

CM 1

CRN 50851-57-5

CMF (C8 H8 O3 S)x

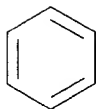
CCI PMS

CM 2

CRN 26914-43-2

CMF C8 H8 O3 S

CCI IDS



D1- CH=CH₂

D1- SO₃H

- IC G03G013-28; B41N001-14; G03G005-14
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 IT Carbon **fibers**
 (anticurling electrophotog. **sheet** coating compn. contg., for printing plate prepn.)
 IT **9003-08-1** 9005-25-8D, oxidized **9080-79-9**
 58056-74-9 94586-98-8
 (anticurling electrophotog. sheet coating compn. contg., for printing plate prepn.)
- L56 ANSWER 15 OF 19 HCA COPYRIGHT 2002 ACS
 101:231625 Reinforcing sheets for laminates for use in covering fields and walls. Arbon, Albert Francois (Papeteries Dalle et Lecomte, Fr.). Fr. Demande FR 2536337 A1 19840525, 14 pp. (French). CODEN: FRXXBL. APPLICATION: FR 1982-19678 19821124.
- AB Reinforcing sheets for laminating with PVC [9002-86-2] for the title use contain cellulose pulp fibers 15-30, strong fiber (e.g., glass fibers) 5-30, mineral filler .ltoreq.50, and **binder** 5-40%. Thus, 6,000 L water, 120 kg chem. wood pulp (refined to 30.degree. SR), 100 kg alumina hydrate, 130 kg 11.5% solids Urecol M [93358-18-0] (**cationic resin**), 10.4 L 50% Al₂(SO₄)₃, and 47 kg glass fibers were combined in a pulping machine and mixed with 2,600 .times. 138 latex 42, 20% Sursolan K 12L [58252-39-4] soln. 52, and 0.6% Accural C 130 [93357-12-1] soln. 35 L to give pulp that was formed into a thin sheet with dry bulk d. 150-180 g/m², which was laminated on both sides with PVC foam.
- IC B32B023-06; B32B031-00; D21H001-06; E04F015-00
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 43
- ST cellulose pulp glass **fiber sheet**; PVC foam reinforcing sheet; alumina hydrate filler **fibrous sheet**; **cationic resin binder fibrous sheet**; **anionic resin binder fibrous sheet**; field covering PVC laminate; wall covering PVC laminate; covering soil wall PVC laminate; paper substitute glass fiber contg

- IT Paper substitutes
(glass **fiber**-cellulose pulp, **laminates** with
PVC, for manuf. of coverings for fields and walls)
- IT Paper
(glass **fiber**-contg., filled, **laminates** with
PVC, for manuf. of coverings for fields and walls)
- IT 9003-05-8D, cationic derivs. 58252-39-4 75285-76-6 93357-12-1
93358-18-0
(**binders** contg., for filled glass fiber-contg. paper
for laminating with PVC, in manuf. of coverings for fields and
walls)
- L56 ANSWER 16 OF 19 HCA COPYRIGHT 2002 ACS
- 101:212971 **Fiber sheet**. (Mitsubishi Paper Mills,
Ltd., Japan). Jpn. Tokkyo Koho JP 59028680 B4 19840714 Showa, 4 pp.
(Japanese). CODEN: JAXXAD. APPLICATION: JP 1975-19636 19750217.
- AB Latexes for manuf. of paper or webs with improved surface uniformity
are prep'd. by mixing an **anionic** vinyl **polymer**
latex with an **anionic polymer** having min.
film-forming temp. <10.degree. and then coagulating the latex with a
water-sol. **cationic polymer** or a polyvalent salt
to give particles having particle size 100-500 .mu.. Thus, a liquor
contg. Geon 576 [51653-10-2] 9 (solids), Nipol L 811 [60748-16-5]
(acrylic polymer latex) 1 (solids), and aq. 2% (solids)
epichlorohydrin-modified polyamide polyamine 32 kg was mixed to give
particles with size 100-500 .mu.. A slurry contg. 100 parts kraft
pulp and 100 parts coagulated particles was passed through a
papermaking machine to give paper with good surface uniformity.
- IC D21H003-42
- CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)
Section cross-reference(s): 40
- ST vinyl polymer latex **binder**; paper **binder** vinyl
polymer; nonwoven **binder** vinyl polymer; particle size
control vinyl polymer
- IT Acrylic polymers, uses and miscellaneous
(coagulation stabilizers, for vinyl polymer **binders**)
- IT Paper
(manuf. of, vinyl polymer latexes contg. acrylic polymers as
binders for)
- IT Rayon, uses and miscellaneous
(nonwovens from, vinyl polymer latexes contg. acrylic polymers as
binders for)
- IT Particle size
(of vinyl polymer latexes, control of, in manuf. of
binders)
- IT 51653-10-2
(**binders**, contg. acrylic polymers, for manuf. of paper
and nonwovens)
- IT 9003-22-9
(**binders**, contg. methacrylic polymers, for manuf. of
paper and nonwovens)
- IT 25232-40-0 60748-16-5

(coagulation stabilizers, for vinyl polymer **binders**)

L56 ANSWER 17 OF 19 HCA COPYRIGHT 2002 ACS

98:144737 Dimensionally stable backing materials for surface coverings. Grose, Reginald E. (Congoleum Corp., USA). Can. CA 1139164 A1 19830111, 30 pp. (English). CODEN: CAXXA4. APPLICATION: CA 1980-359843 19800908. PRIORITY: US 1979-80908 19791001.

AB A dimensionally stable **fibrous sheet** backing material for surface coverings comprises a stable, H2O-sol., cationic, quaternary-modified acrylamide polymer 0.2-2.0, polypropene fibers 17-34, glass fibers 6-23, wood pulp fibers 20-39, a filler or loading agent 15-60, and a synthetic resinous polymeric **binder** 7-27%. Thus, to 5000 gal H2O was added quaternized acrylamide-dimethylaminoethyl methacrylate copolymer 16.4, H2O-sol. **anionic** synthetic **resin** strength additive 73.6, H2O-sol. **cationic** synthetic **resin** strength additive 24.6, polypropene fibers 854, semibleached spruce wood pulp fibers 1040, glass fibers 400, CaCO3 filler (44 .mu.) 1001, and amine polymer-epichlorohydrin adduct 88.3 lb. To the slurry was added a 28%-solids latex **binder** comprising a highly anionic carboxylated butadiene-styrene rubber latex 65, a self-crosslinking poly(vinyl acetate) emulsion 65, and a wax emulsion 20 lb. The pptd. slurry was dild. with H2O to 3% and formed into a 0.030-in.-thick sheet on a paper-making machine. A foamable PVC [9002-86-2] compn. was applied to the surface of the sheet material to give a resilient floor covering which was resistant to various moisture and temp. conditions.

IC D21H003-38; D21H005-12; B32B027-12

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 40

ST fiber backing plastic surface covering; acrylamide copolymer backing surface covering; dimethylaminoethyl methacrylate copolymer backing; polypropene **fiber** backing surface **covering**; wood **fiber** backing surface **covering**; floor **covering fiber** backing plastic; glass **fiber** backing surface **covering**; PVC **fiber** backing floor **covering**

IT 9002-86-2

(cellular, floor **coverings**, **fibrous** backing for)

L56 ANSWER 18 OF 19 HCA COPYRIGHT 2002 ACS

84:60529 Glass **fibers** coated with a size comprising a film-forming **binder** and an amino acid. Flautt, Martin C.; Foley, Kevin M.; Haines, Richard M. (Owens-Corning Fiberglas Corp., USA). U.S. US 3914192 19751021, 7 pp. (English). CODEN: USXXAM. APPLICATION: US 1973-386143 19730806.

AB Good fiber-matrix adhesion was obtained for plastics and rubbers reinforced with glass fibers presized with 0.5-5 parts amino acid or polyamine per 2-5 parts resin **binder**. Typically, glass fibers were sized with a compn. contg. Quasoft HS 60 (polyethylene) [9002-88-4] 12, iso-PrOH 1.5, glycine [56-40-6] coupling agent 1.5,

and water 85%, bundled and heated, impregnated with a blend of Penacolite R 2170 (resorcinol-HCHO resin) [24969-11-7], Gentac FS (butadiene-styrene-vinylpyridine copolymer rubber) [9019-71-0], Dow Latex 874 (vinyl chloride-vinylidene chloride copolymer) [9011-06-7], and a microcryst. paraffin wax, and molded between 2 rubber strips. The joint adhesion was 43 lbs. compared with 12-31 lbs. for silane coupled fibers.

IC B32B

NCL 260004000R

CC 36-6 (Plastics Manufacture and Processing)

IT Sizes

(amino acid- and **polyamine-polymer** as, for glass fibers, for plastic-rubber composites)

IT 1,3-Butadiene, **polymer** with ethenylbenzene, **carboxylated**

Benzene, ethenyl-, polymer with 1,3-butadiene, carboxylated (adhesives, for bonding of glass fibers to rubber)

IT 9002-88-4

(**binders**, for glass fiber sizes)

L56 ANSWER 19 OF 19 HCA COPYRIGHT 2002 ACS

66:66221 **Cationic** ion-exchange **resins**. Bachmann, Reinhard; Krauss, Ulrich; Reuter, Hans; Schwachula, Gerhard; Warnecke, Dieter; Wehlend, Wilhelm; Wolf, Friedrich (VEB Farbenfabrik Wolfen). Ger. (East) DD 51092 19661020, 5 pp. (German). CODEN: GEXXA8. APPLICATION: DD 19630827.

AB Bead copolymn. of styrene (I) and divinylbenzene (II) (contg. 50% PhEt) with or without a 3rd comonomer was carried out in the presence of a catalyst, an emulsion stabilizer, and a surfactant, and the **copolymer** was **sulfonated** to give the title resins. Thus, a mixt. of 1200 kg. I, 300 kg. II, and 5 kg. Bz2O2 was dispersed in an aq. phase composed of 1000 l. water, 6.5 l. 5% fish **glue** soln. and 15 g. oxyethylenated isooctylphenol (phase ratio of monomer mixt. to water 3:2). The dispersion was heated at 70.degree. and 90.degree. for 4 and 8 hrs., resp. The bead polymer was sepd. by centrifugation, washed with water, and dried at 150.degree. for 2 hrs. The product was composed of particles having sizes 0.3-0.5 mm. (33.2%), 0.5-0.75 mm. (49%), and 0.75-1 mm. (17.8%). The copolymer (700 kg.) was swollen in 350 kg. dichloroethane and treated with 2800 l. H2SO4.H2O at 100.degree. for 5 hrs. The excess H2SO4.H2O was removed, and the resin was washed with satd. Na2SO4 soln. and water to give a cation-exchange resin having a capacity of 5.05 meq./g. The 3rd monomers used were Me methacrylate, acrylonitrile, epichlorohydrin, and MeCOCH:CH2, and the other emulsion stabilizers used were polyacrylamide, poly(vinyl alc.), poly(vinylpyrrolidone), poly(ethylene oxide), mepasinsulfonamide (a sulfonamide from C12-18 paraffinic hydrocarbons) and CM-cellulose. The other surfactants used were oxyethylenated compds. of nonylphenol, lauric acid, cetyl alc., cellulose, glycerol monopalmitate, and styrene-sodium maleate copolymer. Azodiisobutyronitrile was also used instead of Bz2O2.

IC C08F

CC 36 (Plastics Manufacture and Processing)
ST **CATIONIC ION EXCHANGE RESINS; ION EXCHANGE
CATIONIC RESINS; RESINS CATIONIC
ION EXCHANGE**
IT Cation exchangers, preparation
(**sulfonated**, by emulsion **polymn.**)
IT Styrene, polymer with divinylbenzene, preparation
Benzene, divinyl-, **polymer** with styrene
(sulfonated, cation exchangers from, manuf. of)

=> d l57 1-37 cbib abs hitstr hitind

L57 ANSWER 1 OF 37 HCA COPYRIGHT 2002 ACS

137:110740 Compositions for the production of molded shapes from finely divided materials. Kroner, Matthias; Gerst, Matthias; Reck, Bernd (BASF A.-G., Germany). Ger. Offen. DE 10101944 A1 20020718, 20 pp. (German). CODEN: GWXXBX. APPLICATION: DE 2001-10101944 20010117.

AB Compns. contg. reaction products of HOCOCH₂CXRCO₂H (I, R = H or CH₂CO₂H, X = OH or NH₂ when Y = H, Y = OH or NH₂ when X = H, XY = .pi. bond) and(or) their anhydrides with NH₃ and, optionally, primary amines and(or) polyols or a mixt. of I and(or) their anhydride and heat-sensitive, NH₃-forming compd. and, optionally, primary amines and(or) polyols are useful as thermally hardenable **binders** for manuf. of moldings from finely divided materials (such as wood fibers) and strengthening of **sheets** from **fibrous** materials (such as natural fiber mats). A typical particleboard compn. was manuf. by spraying a 40% aq. soln. of maleic acid monoamide (II) onto 180 g wood fiber and drying to 7% moisture content, so that the compn. contained 20 g II.

IT **442844-21-5P 442844-23-7P**, Ammonium carbonate-malic acid-triethanolamine copolymer **442844-25-9P**, Ammonium carbonate-citric acid-triethanolamine copolymer (compns. contg. succinimide polymer-forming compds. for thermal prodn. of molded shapes from finely divided materials)

RN 442844-21-5 HCA

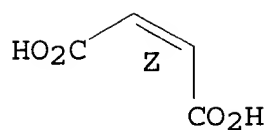
CN 2-Butenedioic acid (2Z)-, ammonium salt, polymer with 2,2',2''-nitrilotris[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 13716-99-9

CMF C4 H4 O4 . x H3 N

Double bond geometry as shown.

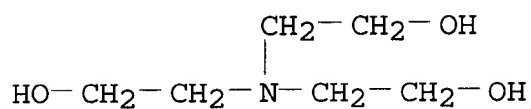


●x NH₃

CM 2

CRN 102-71-6

CMF C6 H15 N O3



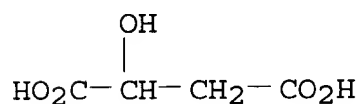
RN 442844-23-7 HCA

CN Butanedioic acid, hydroxy-, polymer with diammonium carbonate and 2,2',2''-nitrilotris[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 6915-15-7

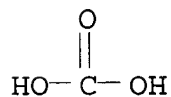
CMF C4 H6 O5



CM 2

CRN 506-87-6

CMF C H2 O3 . 2 H3 N

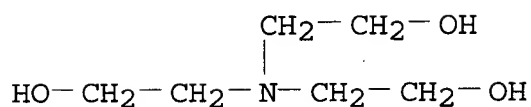


●2 NH₃

CM 3

CRN 102-71-6

CMF C6 H15 N O3



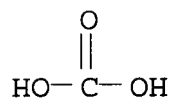
RN 442844-25-9 HCA

CN 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, polymer with diammonium carbonate and 2,2',2''-nitrilotris[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 506-87-6

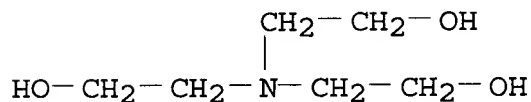
CMF C H2 O3 . 2 H3 N

●2 NH₃

CM 2

CRN 102-71-6

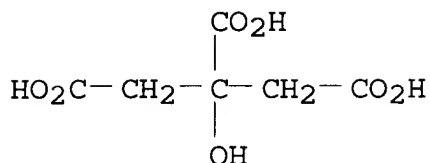
CMF C6 H15 N O3



CM 3

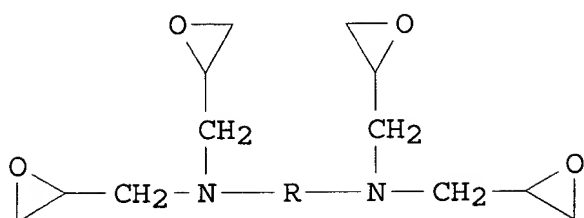
CRN 77-92-9

CMF C6 H8 O7



- IC ICM C09D005-12
ICS C09D177-00; C09D123-00; C08J005-04; C08J003-24; D04H001-42
- CC 43-9 (Cellulose, Lignin, Paper, and Other Wood Products)
Section cross-reference(s): 58
- ST **polycarboxylic ammonia adduct polymer binder** finely divided material molding; maleic acid monoamide polymer **binder** particleboard
- IT **Binders**
Cork
Jute fibers
(compns. contg. succinimide polymer-forming compds. for thermal prodn. of molded shapes from finely divided materials)
- IT 29996-04-1P, Maleic acid monoamide homopolymer 31586-29-5P, Poly(2,5-dioxo-1,3-pyrrolidinediyl) 39444-67-2P, Maleic acid ammonium salt homopolymer 172280-28-3P, Ammonium carbonate-maleic anhydride copolymer **442844-21-5P 442844-23-7P**, Ammonium carbonate-malic acid-triethanolamine copolymer **442844-25-9P**, Ammonium carbonate-citric acid-triethanolamine copolymer 442844-27-1P, Maleic acid monoamide-triethanolamine copolymer
(compns. contg. succinimide polymer-forming compds. for thermal prodn. of molded shapes from finely divided materials)
- L57 ANSWER 2 OF 37 HCA COPYRIGHT 2002 ACS
- 136:254567 Polyester base film showing improved adhesion to ink receiving layer suitable for ink jet printing **sheet**.
Kitazawa, Satoshi; Fukuda, Masayuki (Teijin Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2002079747 A2 20020319, 16 pp. (Japanese).
CODEN: JKXXAF. APPLICATION: JP 2001-82542 20010322. PRIORITY: JP 2000-206450 20000707.

GI



I

AB The title polyester base film comprises an adhesive layer for an ink receiving layer on one side of the film and an antistatic layer on the other side of the film, wherein the adhesive layer comprises 30-80 % of (A) copolyester with a second transition temp. of 20-90.degree., 15-45 % of (B) poly(vinyl alc.) with a sapon. degree of 80-90 mol%, 3-25 % of (C) microparticles with an av. particle size of 20-80 nm, and 5-20 % of (D) a compd. represented by I [R = -CH₂-(m-C₆H₄)-CH₂-, -CH₂-(m-C₆H₁₀)-CH₂-, -(p-C₆H₄)-CH₂-(p-C₆H₄)-], and the adhesive layer shows a surface energy of 50-70 mN/m. The antistatic layer comprises 5-50 % of polycation polymer antistatic agent, and 40-85 % of a **binder(s)** selected from polyester and acrylic resin. The polyester base film is a white polyester film showing glossiness of .gtoreq.50 and optical transmittance of .ltoreq.20 %. The polyester base film shows excellent blocking-resistance, adhesion, antistatic properties, and runnability.

IT **9080-79-9, Sodium Polystyrenesulfonate 31512-74-0**
(polycation polymer, antistatic layer; polyester base film showing improved adhesion to ink receiving layer suitable for ink jet printing **sheet**)

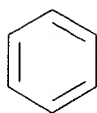
RN 9080-79-9 HCA
CN Benzenesulfonic acid, ethenyl-, homopolymer, sodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 50851-57-5
CMF (C8 H8 O3 S)x
CCI PMS

CM 2

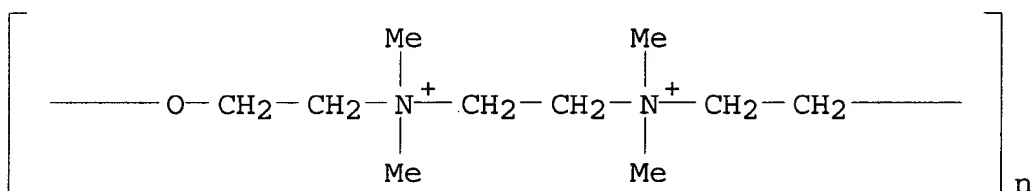
CRN 26914-43-2
CMF C8 H8 O3 S
CCI IDS



D1-CH=CH₂

D1-SO₃H

RN 31512-74-0 HCA
 CN Poly[oxy-1,2-ethanediyl(dimethyliminio)-1,2-ethanediyl(dimethyliminio)-1,2-ethanediyl dichloride] (9CI) (CA INDEX NAME)



● 2 Cl⁻

IC ICM B41M005-00
 ICS B32B027-36; C08J007-04; C09D129-04; C09D167-00
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 38
 ST polyester base film ink jet printing **sheet** adhesive layer
 IT Acrylic polymers, uses
 (crosslinked, adhesive layer; polyester base film showing improved adhesion to ink receiving layer suitable for ink jet printing **sheet**)
 IT Ionene polymers
 (polycation polymer, antistatic layer; polyester base film showing improved adhesion to ink receiving layer suitable for ink jet printing **sheet**)
 IT Ink-jet recording **sheets**
 (polyester base film showing improved adhesion to ink receiving layer suitable for ink jet printing **sheet**)
 IT Polyesters, processes
 (polyester base film showing improved adhesion to ink receiving

- layer suitable for ink jet printing **sheet**)
- IT Polyesters, uses
(polyester base film showing improved adhesion to ink receiving layer suitable for ink jet printing **sheet**)
- IT 73144-93-1P, Ethylene glycol-isophthalic acid-neopentyl glycol-5-sodium sulfoisophthalic acid-terephthalic acid copolymer
89917-19-1P, Diethylene glycol-ethylene glycol-isophthalic acid-neopentyl glycol-5-Sodiosulfoisophthalic acid-terephthalic acid copolymer
167025-13-0P, Ethylene glycol-isophthalic acid-2,6-naphthalenedicarboxylic acid-neopentyl glycol-Monopotassium 5-sulfoisophthalate copolymer
180483-28-7P, 1,4-Butanediol-diethylene glycol-ethylene glycol-isophthalic acid-neopentyl glycol-Monopotassium 5-sulfoisophthalate-terephthalic acid copolymer
274913-17-6P, 1,4-Butanediol-diethylene glycol-ethylene glycol-isophthalic acid-2,6-naphthalenedicarboxylic acid-neopentyl glycol-5-Sodiosulfoisophthalic acid-terephthalic acid copolymer
274913-18-7P, 1,4-Butanediol-ethylene glycol-isophthalic acid-2,6-naphthalenedicarboxylic acid-neopentyl glycol-5-Sodiosulfoisophthalic acid copolymer
(adhesive layer; polyester base film showing improved adhesion to ink receiving layer suitable for ink jet printing **sheet**)
- IT 9002-92-0, Poly(oxyethylene) lauryl ether 63738-22-7 65992-66-7
(adhesive layer; polyester base film showing improved adhesion to ink receiving layer suitable for ink jet printing **sheet**)
- IT 79401-34-6P, Acrylonitrile-ethyl acrylate-methyl methacrylate-N-methylol methacrylamide copolymer 368884-74-6P, 1,4-Cyclohexanedimethanol-4,4'-diphenyldicarboxylic acid-ethylene glycol-isophthalic acid-2,6-naphthalenedicarboxylic acid-neopentyl glycol-terephthalic acid copolymer
(antistatic layer; polyester base film showing improved adhesion to ink receiving layer suitable for ink jet printing **sheet**)
- IT 7631-86-9, Silica, uses
(colloidal, adhesive layer; polyester base film showing improved adhesion to ink receiving layer suitable for ink jet printing **sheet**)
- IT 9080-79-9, Sodium Polystyrenesulfonate 31512-74-0
83543-32-2 227945-33-7
(polycation polymer, antistatic layer; polyester base film showing improved adhesion to ink receiving layer suitable for ink jet printing **sheet**)
- IT 25038-59-9P, Ethylene glycol-terephthalic acid copolymer, processes
(polyester base film showing improved adhesion to ink receiving layer suitable for ink jet printing **sheet**)
- IT 9002-89-5, Poly(vinyl alcohol)
(sapond., adhesive layer; polyester base film showing improved adhesion to ink receiving layer suitable for ink jet printing **sheet**)
- IT 13463-67-7, Titanium oxide, uses
(white pigment; polyester base film showing improved adhesion to

ink receiving layer suitable for ink jet printing sheet
)

L57 ANSWER 3 OF 37 HCA COPYRIGHT 2002 ACS

135:372184 Polyelectrolyte complexes of **cationic** and **anionic polymers** and their manufacture.

Noerenberg, Ralf; Hildebrandt, Soeren; Kluge, Michael; Boeckh, Dieter; Panandiker, Rajan K.; Wertz, William C.; Randall, Sherri L. (BASF Aktiengesellschaft, Germany). PCT Int. Appl. WO 2001085819 A2 20011115, 20 pp. DESIGNATED STATES: W: CA, JP, MX, US; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR. (German). CODEN: PIXXD2. APPLICATION: WO 2001-EP5230 20010509. PRIORITY: US 2000-PV202937 20000509.

AB The title complexes, useful, e.g., for textile finishing, comprise (A) **cationic** condensates of (i) (cyclo)alkylamines, alkoxyamines, amino alcs., cyclic amines, alkylenediamines, etc., and (ii) a **crosslinking** agent selected from epihalohydrins, bishalohydrins of diols, bishalohydrins of polyalkylene glycols, bishalohydrins of polytetrahydrofurans, alkylene dihalides, alkylene trihalides, bis-, tris- or tetra-epoxides, and (B) **anionic** compds. with .gtoreq.3 **anionic** groups, at a loading ratio of **anionic/cationic polymers** of 0.01-20. The complexes are manufd. in soln. or homogeneous dispersion form by turbulent mixing or co-spraying of the **cationic** and **anionic** components. Thus, mixing 50 mL of an aq. soln. (100 mg/L) of 1:1.4 (wt. ratio) imidazole-epichlorohydrin polycondensate (mol. wt. 8 kDa; charge d. 5.6 meq/g) with 50 mL of aq. soln. (50 mg/L) of poly(acrylic acid) (mol. wt. 8 kDa; charge d. 11 meq/g) and stirring the mixt. for 5 min gave a turbid soln. of a charge-neutral complex.

IT 374540-32-6P

(manuf. of polyelectrolyte complexes of **cationic** and **anionic polymers**)

RN 374540-32-6 HCA

CN 2-Butenedioic acid (2Z)-, polymer with 2-propenoic acid, compd. with (chloromethyl)benzene compd. with (chloromethyl)oxirane polymer with piperazine (9CI) (CA INDEX NAME)

CM 1

CRN 110438-26-1

CMF C7 H7 Cl . x (C4 H10 N2 . C3 H5 Cl O)x

CM 2

CRN 100-44-7

CMF C7 H7 Cl

Ph-CH₂-Cl

CM 3

CRN 24938-07-6

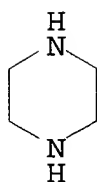
CMF (C4 H10 N2 . C3 H5 Cl O)x

CCI PMS

CM 4

CRN 110-85-0

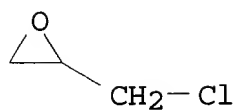
CMF C4 H10 N2



CM 5

CRN 106-89-8

CMF C3 H5 Cl O



CM 6

CRN 29132-58-9

CMF (C4 H4 O4 . C3 H4 O2)x

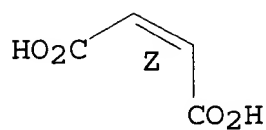
CCI PMS

CM 7

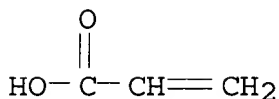
CRN 110-16-7

CMF C4 H4 O4

Double bond geometry as shown.



CM 8

CRN 79-10-7
CMF C3 H4 O2

IC ICM C08G012-00
 CC 35-8 (Chemistry of Synthetic High Polymers)
 IT Polyelectrolytes
 (**anionic**; manuf. of polyelectrolyte complexes of
 cationic and **anionic polymers**)
 IT Polyelectrolytes
 (**cationic**; manuf. of polyelectrolyte complexes of
 cationic and **anionic polymers**)
 IT Polyelectrolytes
 (manuf. of polyelectrolyte complexes of **cationic** and
 anionic polymers)
 IT 374540-31-5P **374540-32-6P**
 (manuf. of polyelectrolyte complexes of **cationic** and
 anionic polymers)

L57 ANSWER 4 OF 37 HCA COPYRIGHT 2002 ACS

135:273892 Microcapsules having improved wall characteristics and preparation. Camillus, Joseph; Katampe, Ibrahim (Cycolor, Inc., USA). PCT Int. Appl. WO 2001070385 A2 20010927, 24 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-US7394 20010308. PRIORITY: US 2000-528035 20000317.

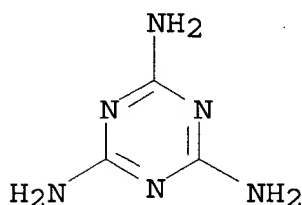
AB A process for forming microcapsules having substantially impermeable microcapsule walls (for use in a photoimaging system) comprises forming an emulsion of an internal phase in a continuous aq. phase, the internal phase including a photosensitive compn. and a polyvalent isocyanate, the continuous aq. phase including a sulfonated polystyrene, .gtoreq.1 of the internal phase or the continuous aq. phase further including a hydrophilic polymer; and wrapping particles of the internal phase in an amine-formaldehyde condensation product produced by in situ condensation of an amine and formaldehyde. A useful hydrophilic polymer incorporated into the walls is gelatin, which promotes moisture retention, temp. and humidity stability.

IT 9003-08-1, Formaldehyde-melamine copolymer
(forming microcapsules having impermeable wall characteristics
through incorporation of hydrophilic polymer and used in full
color imaging)
RN 9003-08-1 HCA
CN 1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde (9CI) (CA
INDEX NAME)

CM 1

CRN 108-78-1

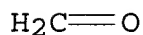
CMF C3 H6 N6



CM 2

CRN 50-00-0

CMF C H2 O

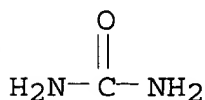


IT 9011-05-6, Formaldehyde-urea copolymer
(microcapsule; forming microcapsules having impermeable wall
characteristics through incorporation of hydrophilic polymer and
used in full color imaging)
RN 9011-05-6 HCA
CN Urea, polymer with formaldehyde (9CI) (CA INDEX NAME)

CM 1

CRN 57-13-6

CMF C H4 N2 O



CM 2

CRN 50-00-0

CMF C H2 O

 $\text{H}_2\text{C}=\text{O}$

IT 9080-79-9, Poly(vinylbenzenesulfonic acid) sodium salt
(stabilizer; forming microcapsules having impermeable wall
characteristics through incorporation of hydrophilic polymer and
used in full color imaging)

RN 9080-79-9 HCA

CN Benzenesulfonic acid, ethenyl-, homopolymer, sodium salt (9CI) (CA
INDEX NAME)

CM 1

CRN 50851-57-5

CMF (C8 H8 O3 S)x

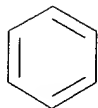
CCI PMS

CM 2

CRN 26914-43-2

CMF C8 H8 O3 S

CCI IDS

 $\text{D1}-\text{CH}=\text{CH}_2$ $\text{D1}-\text{SO}_3\text{H}$

IC ICM B01J013-00

CC 38-3 (Plastics Fabrication and Uses)


Section cross-reference(s): 74

IT 124759-92-8, HRJ 4542

(coating **binder** for photosensitive **sheet**;
forming microcapsules having impermeable wall characteristics
through incorporation of hydrophilic polymer and used in full
color imaging)

IT 9003-08-1, Formaldehyde-melamine copolymer 53200-31-0,
Desmodur N-100

(forming microcapsules having impermeable wall characteristics
through incorporation of hydrophilic polymer and used in full
color imaging)

- IT 9011-05-6, Formaldehyde-urea copolymer
(microcapsule; forming microcapsules having impermeable wall characteristics through incorporation of hydrophilic polymer and used in full color imaging)
- IT 9008-38-2 9080-79-9, Poly(vinylbenzenesulfonic acid) sodium salt
(stabilizer; forming microcapsules having impermeable wall characteristics through incorporation of hydrophilic polymer and used in full color imaging)
- L57 ANSWER 5 OF 37 HCA COPYRIGHT 2002 ACS
133:179175 Method for reducing the polymer and bentonite requirements in papermaking. Humphreys, Harry Nelson; Talmadge, Charles (BASF Corporation, USA). U.S. US 6103065 A 20000815, 7 pp. (English). CODEN: USXXAM. APPLICATION: US 1999-281400 19990330.
- AB The retention and drainage of papermaking furnish are improved by (a) adding 0.005-0.25 wt.% of .gtoreq.1 **cationic** high-charge d. polymer having mol. wt. 100,000-2,000,000 and charge d. >4.0 Meq., after the last point of high shear, to form small flocs (<0.25-in. diam.), (b) adding 0-0.20 wt.% of .gtoreq.1 polymer having mol. wt. >2,000,000 and charge d. <4.0 Meq. concurrently with or subsequent to (a), then adding 0.025-0.20 wt.% hydrated slurry of swellable bentonite clay. The polymer and bentonite requirements in papermaking are reduced by reacting medium and high mol. wt. polymers with bentonite. Further, mech. shearing of the furnish after polymer addn. is not required. Thus, 0.01% Polymin SKA (modified polyethyleneimine, mol. wt. >1,000,000, charge d. 9 Meq/g) and 0.01% Polymin PR 8578 (**cationic** polyacrylamide emulsion, mol. wt. .apprx.5,000,000, charge d. 1.8 Meq/g) were added to a 0.6% solids furnish comprising kraft softwood 50, thermomech. pulp 40, and recycled coated paper 10% at pH 4.8, followed by 0.25 % Opazil NH (activated bentonite), giving drainage time to obtain 300 cc filtrate 45 s and unretained solids 305 mg/300 mg filtrate, compared with 47 and 600, resp., when the Opazil NH was added first.
- IT 9002-98-6, Polymin PR 9711
(**anionic** scavenger, Polymin PR 9711; reducing the polymer and bentonite requirements in papermaking)
- RN 9002-98-6 HCA
- CN Aziridine, homopolymer (9CI) (CA INDEX NAME)
- CM 1
- CRN 151-56-4
- CMF C2 H5 N
- 
- IT 9002-98-6D, poly(amidoamine)-grafted

(**crosslinked**; reducing the polymer and bentonite requirements in papermaking)

RN 9002-98-6 HCA

CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 151-56-4

CMF C2 H5 N



IC ICM D21H017-68

ICS D21H017-56

NCL 162181800

CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)

ST papermaking polymer bentonite redn; polyethyleneimine bentonite retention papermaking; **cationic** polyacrylamide retention papermaking

IT Polyelectrolytes

(**cationic**; reducing the **polymer** and bentonite requirements in papermaking)

IT Amines, uses

(polyamines, nonpolymeric, amido, polyethyleneimine grafted with, **crosslinked**; reducing the polymer and bentonite requirements in papermaking)

IT 9002-98-6, **Polymin** PR 9711

(**anionic** scavenger, **Polymin** PR 9711; reducing the polymer and bentonite requirements in papermaking)

IT 9002-98-6D, poly(amidoamine)-grafted

(**crosslinked**; reducing the polymer and bentonite requirements in papermaking)

IT 79-06-1D, Acrylamide, **cationic polymers**

217821-63-1, **Polymin** SKA 288309-91-1, **Polymin** PR 8578

(reducing the polymer and bentonite requirements in papermaking)

L57 ANSWER 6 OF 37 HCA COPYRIGHT 2002 ACS

131:11571 Recording **sheets**. Malhotra, Shadi L.; Naik, Kirit

N. (Xerox Corp., USA). U.S. US 5908723 A 19990601, 15 pp.

(English). CODEN: USXXAM. APPLICATION: US 1997-852550 19970507.

AB Disclosed are opaque plastic recording **sheets** comprised of (A) a substrate, (B) an ink-receiving coating on the front side of the substrate capable of absorbing an ink vehicle in which the ink-receiving layer coating is comprised of (1) a hydrophobic **binder** polymer, (2) an ink-wetting agent, (3) an ink-spreading agent, (4) a dye mordant, (5) a lightfastness-promoting agent, (6) a filler, and (7) an optional biocide, and (C) a toner-receiving coating in contact with the reverse side of the substrate in which the toner-receiving coating is comprised of (1) a

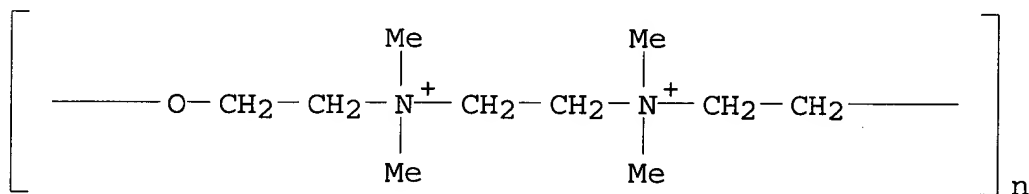
binder polymer, (2) a toner-wetting agent, (3) a toner-spreading agent, (4) an antistatic agent, (5) a pigment, (6) a lightfastness-promoting agent, and (7) an optional biocide.

IT 31512-74-0 104983-61-1 206559-67-3

(in prepg. opaque plastic recording **sheets** with electrophotog. toner-receiving layers on one side and on other side ink-receiving layers)

RN 31512-74-0 HCA

CN Poly[oxy-1,2-ethanediyl(dimethyliminio)-1,2-ethanediyl(dimethyliminio)-1,2-ethanediyl dichloride] (9CI) (CA INDEX NAME)



RN 104983-61-1 HCA

CN 2-Butenedioic acid (2Z)-, polymer with ethenylbenzenesulfonic acid, sodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 78145-90-1

CMF (C8 H8 O3 S . C4 H4 O4)x

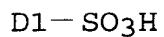
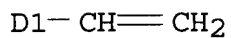
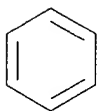
CCI PMS

CM 2

CRN 26914-43-2

CMF C8 H8 O3 S

CCI IDS

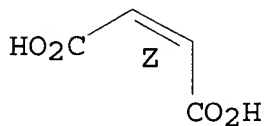


CM 3

CRN 110-16-7

CMF C4 H4 O4

Double bond geometry as shown.



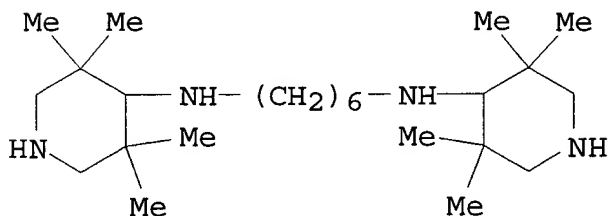
RN 206559-67-3 HCA

CN 1,6-Hexanediamine, N,N'-bis(3,3,5,5-tetramethyl-4-piperidiny)-,
polymer with 2,4-dichloro-6-(4-morpholinyl)-1,3,5-triazine (9CI)
(CA INDEX NAME)

CM 1

CRN 206559-66-2

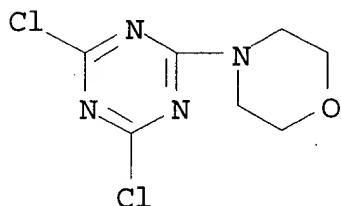
CMF C24 H50 N4



CM 2

CRN 6601-22-5

CMF C7 H8 Cl2 N4 O



IC ICM B41M005-00
 NCL 430031000
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 ST ink jet recording opaque plastic **sheet**; electrophotog recording opaque plastic **sheet**
 IT Cellophane
 (in prepg. opaque plastic recording **sheets** with electrophotog. toner-receiving layers on one side and on other side ink-receiving layers)
 IT Coumarone-indene resins
 Polybenzimidazoles
 Polycarbonates, uses
 Polyesters, uses
 Polyimides, uses
 Polysulfones, uses
 (in prepg. opaque plastic recording **sheets** with electrophotog. toner-receiving layers on one side and on other side ink-receiving layers)
 IT Ink-jet printing
 (opaque plastic recording **sheets** with electrophotog. toner-receiving layers on one side and on other side ink-receiving layers for)
 IT Electrophotography
 (opaque plastic recording **sheets** with ink-receiving layers on one side and on other side toner-receiving layers for)
 IT Polysulfones, uses
 (polyether-; in prepg. opaque plastic recording **sheets** with electrophotog. toner-receiving layers on one side and on other side ink-receiving layers)
 IT Vinyl compounds, uses
 (polymers, butyrals, polymer with vinyl alc.; in prepg. opaque plastic recording **sheets** with electrophotog. toner-receiving layers on one side and on other side ink-receiving layers)
 IT Polyethers, uses
 (polysulfone-; in prepg. opaque plastic recording **sheets** with electrophotog. toner-receiving layers on one side and on other side ink-receiving layers)
 IT 91-76-9D, hydroxymethyl, ethylated and/or methylated 103-96-8
 109-31-9 123-28-4 376-90-9 425-61-6 429-07-2 471-34-1,

Carbonic acid calcium salt (1:1), uses 546-93-0 873-71-2
 1115-20-4 1309-48-4, Magnesium oxide (MgO), uses 1314-13-2, Zinc
 oxide (ZnO), uses 1314-23-4, Zirconium oxide (ZrO₂), uses
 1314-98-3, Zinc sulfide (ZnS), uses 1318-93-0D, Montmorillonite
 ((Al_{1.33}-1.67Mg_{0.33}-0.67)(Ca₀-1Na₀-1)0.33Si₄(OH)₂O₁₀.xH₂O),
 nitrile-intercalated 1327-33-9, Antimony oxide 1327-43-1
 1333-84-2 1344-95-2 1519-46-6 2150-44-9 2150-45-0
 2150-46-1 2472-88-0 3089-19-8 3883-94-1 3896-11-5
 4105-92-4 4196-86-5 5187-82-6 5467-72-1 5574-97-0
 6174-95-4 6683-19-8 6834-92-0 7631-86-9, Silica, uses
 7727-43-7 7789-75-5, Calcium fluoride (CaF₂), uses 9002-86-2
 9003-07-0 9003-07-0D, maleated 9003-07-0D, maleated, chlorinated
 9003-22-9 9004-36-8 9004-41-5 9004-48-2 9004-62-0D,
 hydrophobically modified 9006-26-2 9010-76-8 9011-06-7
 9012-09-3 9015-73-0 9020-73-9 9032-42-2 9033-69-6
 9036-94-6 9042-19-7 9044-05-7 9050-31-1 9051-49-4
 12047-27-7, Barium titanium oxide (BaTiO₃), uses 13423-48-8
 13463-67-7, Titanium oxide (TiO₂), uses 15510-55-1 16883-69-5
 21544-03-6 23906-97-0 24207-41-8 24937-78-8D, maleated
 24968-11-4 24981-14-4 25036-01-5 25038-91-9 25052-62-4
 25086-48-0 25101-13-7 25212-06-0D, copolymers with dimer acids
 25213-24-5 25230-87-9 25655-35-0 25750-84-9 25895-44-7
 26061-90-5 26221-73-8 26337-35-9 26375-31-5 26590-05-6
 26742-84-7 26742-84-7D, hydrogenated 26780-96-1 26825-94-5
 28428-42-4 30388-01-3 **31512-74-0** 33229-34-4
 37337-45-4 40105-52-0 41171-14-6 41525-41-1 42503-45-7
 51331-09-0 52519-63-8 52907-01-4 52993-94-9 54288-70-9
 54667-43-5 58205-99-5 59326-44-2 60785-11-7 61843-70-7
 61969-53-7 64652-60-4 67423-06-7 70862-65-6 76644-74-1
 79723-02-7, uses 79906-32-4 85758-72-1 86261-90-7 86377-01-7
 91313-01-8 93792-59-7 97635-64-8 104706-47-0
104983-61-1 106302-03-8 107709-25-1 112901-67-4
 113381-65-0 117160-99-3 123286-51-1 127004-86-8 136392-68-2
 159666-35-0 181425-91-2 197646-62-1 **206559-67-3**
 212968-06-4 215931-09-2 215935-04-9 225230-50-2 225230-51-3
 225230-55-7 225230-81-9 225230-85-3 225230-96-6
 225230-98-8D, hydroxy-terminated 225231-00-5 225231-12-9
 (in prepg. opaque plastic recording **sheets** with
 electrophotog. toner-receiving layers on one side and on other
 side ink-receiving layers)

L57 ANSWER 7 OF 37 HCA COPYRIGHT 2002 ACS

130:197433 Thermally hardenable, aqueous compositions based on
carboxylic group-containing polymers. Reck,
 Bernd; Morrison, Bradley Ronald (BASF A.-G., Germany). Ger. Offen.
 DE 19735958 A1 19990225, 22 pp. (German). CODEN: GWXXBX.
 APPLICATION: DE 1997-19735958 19970819.

AB Thermally hardenable, aq. compns. contain (A) .gtoreq.1 polymer
 prepd. by radical polymn. of monomer mixts. contg. 10-100%
 .alpha., .beta.-ethylenically unsatd. mono- or dicarboxylic acid
 and(or) anhydride, (B) .gtoreq.1 alkanolamine having .gtoreq.2
 hydroxyalkyl groups, (C) 0.1-30% [based on (A) and (B)] activated C

and(or) C mol. sieve. These compns. are useful **binders** for manuf. of odor-free **sheets** or moldings from finely divided materials, such as fibers, wood chips, and scraps. A typical compn. for impregnation of a pressed **sheet** of wood chips contained 50% aq. 55:45 acrylic acid-maleic acid copolymer (mol. wt. 3000) soln. 200, triethanolamine 30, and Carboraffin P (activated C) 2.6 g.

IT **165670-41-7**, Acrylic acid-maleic acid-triethanolamine copolymer

(thermally hardenable, aq. compns. based on **carboxylic** group-contg. **polymers** for **binders** for odor-free **fibrous sheets** and moldings)

RN 165670-41-7 HCA

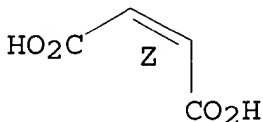
CN 2-Butenedioic acid (2Z)-, polymer with 2,2',2''-nitrilotris[ethanol] and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 110-16-7

CMF C4 H4 O4

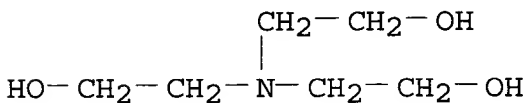
Double bond geometry as shown.



CM 2

CRN 102-71-6

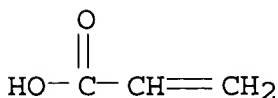
CMF C6 H15 N O3



CM 3

CRN 79-10-7

CMF C3 H4 O2



IC ICM C08K003-04

ICS C08J003-24; C08K005-17; C08K005-05; B27N003-00; E04B001-62;
D04H001-64; D06M015-263

ICA F16L059-00; C08F020-06; C08F020-08; C08F022-02; C08F022-04

ICI C08K005-17, C08K005-05; C08K003-04, C08K007-00

CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 43

ST odor free thermosetting **binder fibrous sheet** molding; particleboard **binder** acrylic acid maleic acid copolymer; carbon activated filler **binder** particleboard; triethanolamine crosslinker acrylic acid maleic acid copolymer **binder**

IT Charcoal
(activated, Carboraffin P; thermally hardenable, aq. compns. based on **carboxylic** group-contg. **polymers** for **binders** for odor-free **fibrous sheets** and moldings)

IT Crosslinking agents
(amino alcs.; thermally hardenable, aq. compns. based on **carboxylic** group-contg. **polymers** for **binders** for odor-free **fibrous sheets** and moldings)

IT Alcohols, uses
(amino, crosslinkers; thermally hardenable, aq. compns. based on **carboxylic** group-contg. **polymers** for **binders** for odor-free **fibrous sheets** and moldings)

IT Molecular sieves
(carbon, fillers; thermally hardenable, aq. compns. based on **carboxylic** group-contg. **polymers** for **binders** for odor-free **fibrous sheets** and moldings)

IT Reinforced plastics
(fiber-reinforced; thermally hardenable, aq. compns. based on **carboxylic** group-contg. **polymers** for **binders** for odor-free **fibrous sheets** and moldings)

IT Construction materials
(particleboards; thermally hardenable, aq. compns. based on **carboxylic** group-contg. **polymers** for **binders** for odor-free **fibrous sheets** and moldings)

IT Automobiles
(parts, linings; thermally hardenable, aq. compns. based on **carboxylic** group-contg. **polymers** for **binders** for odor-free **fibrous sheets** and moldings)

IT **Binders**
Nonwoven fabrics
(thermally hardenable, aq. compns. based on **carboxylic** group-contg. **polymers** for **binders** for odor-free **fibrous sheets** and moldings)

IT 165670-41-7, Acrylic acid-maleic acid-triethanolamine

copolymer

(thermally hardenable, aq. compns. based on **carboxylic**
group-contg. **polymers** for **binders** for
odor-free **fibrous sheets** and moldings)

L57 ANSWER 8 OF 37 HCA COPYRIGHT 2002 ACS

128:237175 Imaging element containing electrically conductive polymer
blend. Zumbulyadis, Nicholas; Shaw-Klein, Lori Jeanne; Gardner,
Sylvia Alice (Eastman Kodak Co., USA). Eur. Pat. Appl. EP 828184 A1
19980311, 10 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR,
GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI. (English). CODEN:
EPXXDW. APPLICATION: EP 1997-202603 19970823. PRIORITY: US
1996-707570 19960904.

AB An imaging element, such as a photog., electrostatog., thermal
imaging element, comprises a support, an imaging-forming layer, and
a transparent elec. conductive layer which includes an effective
amt. of polyaniline styrenesulfonate. In a preferred embodiment,
the polyaniline styrenesulfonate is dispersed in a **binder**.

IT **125210-19-7**

(imaging elements with electroconductive layers contg.)

RN 125210-19-7 HCA

CN Benzenesulfonic acid, ethenyl-, homopolymer, compd. with benzenamine
homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 50851-57-5

CMF (C8 H8 O3 S)x

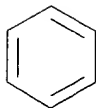
CCI PMS

CM 2

CRN 26914-43-2

CMF C8 H8 O3 S

CCI IDS



D1-CH=CH₂

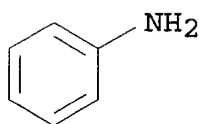
D1-SO₃H

CM 3

CRN 25233-30-1
 CMF (C6 H7 N)x
 CCI PMS

CM 4

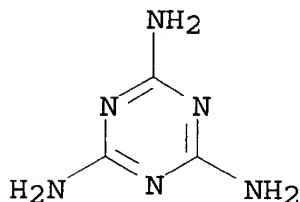
CRN 62-53-3
 CMF C6 H7 N



IT 9003-08-1, Cymel 303
 (imaging elements with electroconductive layers contg.
 poly(aniline styrenesulfonate) and)
 RN 9003-08-1 HCA
 CN 1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde (9CI) (CA
 INDEX NAME)

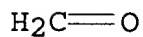
CM 1

CRN 108-78-1
 CMF C3 H6 N6



CM 2

CRN 50-00-0
 CMF C H2 O



IC ICM G03C001-89
 ICS G03G005-00; B41M005-00; B41M005-40
 CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 IT Ink-jet recording **sheets**
 Ink-jet recording **sheets**

(paper; electroconductive layers contg. poly(aniline styrenesulfonate) for)

IT 125210-19-7

(imaging elements with electroconductive layers contg.)

IT 9003-08-1, Cymel 303 25249-59-6, Acrylic acid-acrylonitrile-vinylidene chloride copolymer 26355-01-1, Hydroxyethyl methacrylate-methyl methacrylate copolymer 26660-36-6, Butyl acrylate-glycidyl methacrylate copolymer 29797-71-5 54590-72-6, AQ 55 148619-48-1, Ucarlink XL 29SE 200359-24-6, Carboset GA 1931

(imaging elements with electroconductive layers contg. poly(aniline styrenesulfonate) and)

L57 ANSWER 9 OF 37 HCA COPYRIGHT 2002 ACS

128:198645 Ink-jet recording **sheet** and its production method.

Tsuji, Takahiro (Keiwa Shoko K. K., Japan). Jpn. Kokai Tokkyo Koho JP 10035093 A2 19980210 Heisei, 5 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1996-214216 19960725.

AB The title recording **sheet**, using an ink contg. sol fine particles made of dye-dispersed inorg. oxide and/or hydroxide, has an ink-receiving layer made of at least a polymeric water-absorbent, porous fine particles, a **binder** and a gelling agent on a substrate **sheet**. The recording **sheet** shows rapid ink-gelling ability and good image stability and scratch-resistance after printing.

IT 9002-98-6 26913-06-4, Poly[imino(1,2-ethanediyl)] (**binder** resin contained in ink-receiving layer for ink-jet recording material)

RN 9002-98-6 HCA

CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

CM 1

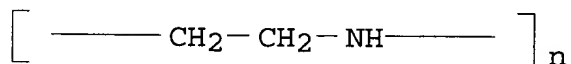
CRN 151-56-4

CMF C2 H5 N



RN 26913-06-4 HCA

CN Poly[imino(1,2-ethanediyl)] (9CI) (CA INDEX NAME)



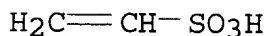
IT 26101-52-0, Polyvinyl sulfonic acid 50851-57-5, Polystyrene sulfonic acid

(polymeric water-absorbent contained in ink-receiving layer for ink-jet recording material)

RN 26101-52-0 HCA
 CN Ethenesulfonic acid, homopolymer (9CI) (CA INDEX NAME)

CM 1

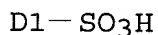
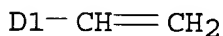
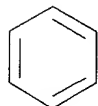
CRN 1184-84-5
 CMF C2 H4 O3 S



RN 50851-57-5 HCA
 CN Benzenesulfonic acid, ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 26914-43-2
 CMF C8 H8 O3 S
 CCI IDS



IC ICM B41M005-00
 ICS B41M005-00; B05D005-04
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 ST ink jet recording **sheet** receiving layer; polymer water absorbent ink receiving layer; porous fine particle ink receiving layer; **binder** gelling agent ink receiving layer
 IT Polyoxyalkylenes, uses
 (**binder** resin contained in ink-receiving layer for ink-jet recording material)
 IT Ink-jet recording **sheets**
 (having ink-receiving layer contg. polymer water-absorbent, porous fine particle, **binder** and gelling agent)
 IT Ink-jet recording **sheets**
 Ink-jet recording **sheets**
 (paper; having ink-receiving layer contg. polymer water-absorbent, porous fine particle, **binder** and gelling agent)

- IT Paper
Paper
(printing, ink-jet; having ink-receiving layer contg. polymer water-absorbent, porous fine particle, **binder** and gelling agent)
- IT Polyesters, uses
(water-sol.; **binder** resin contained in ink-receiving layer for ink-jet recording material)
- IT 9002-89-5, PVA 117 **9002-98-6** 9003-05-8, Polyacrylamide
9003-20-7, Polyvinyl acetate 9003-39-8, Polyvinyl pyrrolidone
25322-68-3, Polyethylene oxide 25322-69-4, Polypropylene oxide
26336-38-9, Polyethyleneamine **26913-06-4**,
Poly[imino(1,2-ethanediyl)] 30551-89-4, Polyallylamine
(**binder** resin contained in ink-receiving layer for ink-jet recording material)
- IT 9003-01-4, Polyacrylic acid 25087-26-7, AC 30H **26101-52-0**
, Polyvinyl sulfonic acid **50851-57-5**, Polystyrene sulfonic acid
(polymeric water-absorbent contained in ink-receiving layer for ink-jet recording material)
- L57 ANSWER 10 OF 37 HCA COPYRIGHT 2002 ACS
- 127:311350 Conditioning shampoo compositions containing **anionic** surfactants and **cross-linked cationic polymers**. Guskey, Susan Marie; Royce, Douglas Allan (Procter & Gamble Company, USA). PCT Int. Appl. WO 9735544 A1 19971002, 27 pp. DESIGNATED STATES: W: AU, BR, CA, CN, JP, KR, MX; RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1997-US3695 19970318. PRIORITY: US 1996-622776 19960327.
- AB Disclosed are aq. conditioning shampoo compns. with improved stability and conditioning, which comprise an **anionic** deterative surfactant component and an org., **cross-linked, cationic** hair conditioning **polymer** having a relatively high **cationic** charge d. of from about 4 meq/gm to about 7 meq/gm.
The **cross-linked** polymer consists essentially of a **crosslinking** agent and monomer units selected from the group consisting of dialkylaminoalkyl acrylamides, dialkylaminoalkyl methacrylamides, dialkylaminoalkyl acrylates, dialkylaminoalkyl methacrylates, and combinations thereof, wherein each of the monomer units in the **cross-linked polymer** are **cationic** at the pH of the shampoo compn. A shampoo contained ammonium laureth-3 sulfate 10.00, ammonium lauryl sulfate 6.00, cocamide MEA 0.80, Polyquaternium-37 0.15, cetyl alc. 0.42, stearyl alc. 0.18, ethylene glycol distearate 1.50, dimethicone 1.00, perfume soln. 0.60, DMDM hydantoin 0.37, water q.s. 100%, and color soln. 0.37 ppm.
- IC ICM A61K007-06
ICS A61K007-50
- CC 62-3 (Essential Oils and Cosmetics)
- ST conditioning shampoo **anionic** surfactant **cationic**

polymer

- IT Acrylic polymers, biological studies
 Polymers, biological studies
 Polysiloxanes, biological studies
 Shampoos
 Surfactants
 (conditioning shampoo compns. contg. **anionic**
 surfactants and **cross-linked cationic**
 polymers)
- IT Shampoos
 (conditioning; conditioning shampoo compns. contg.
 anionic surfactants and **cross-linked**
 cationic polymers)
- IT 107-43-7D, Betaine, cocamidopropyl derivs. 2235-54-3, Ammonium
 lauryl sulfate 7664-93-9D, Sulfuric acid, alkyl and alkyl ether
 derivs., biological studies 9006-65-9, Dimethicone 9016-00-6,
 Polydimethylsiloxane 26161-33-1, Polyquaternium 37 31900-57-9,
 Polydimethylsiloxane 32612-48-9, Ammonium laureth 3 sulfate
 (conditioning shampoo compns. contg. **anionic**
 surfactants and **cross-linked cationic**
 polymers)

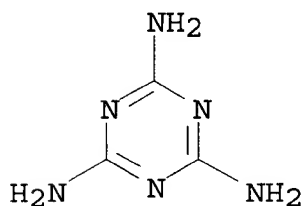
L57 ANSWER 11 OF 37 HCA COPYRIGHT 2002 ACS

126:90959 Manufacture of composite **sheets** comprising a
fiber- and inorganic aggregate-filled organic polymeric
 matrix. Andersen, Per J.; Hodson, Simon K. (E. Khashoggi
 Industries, USA). U.S. US 5582670 A 19961210, 62 pp.,
 Cont.-in-part of U.S. 5,385,764. (English). CODEN: USXXAM.
 APPLICATION: US 1993-154436 19931119. PRIORITY: US 1992-929898
 19920811; US 1992-982383 19921125; US 1993-95662 19930721; US
 1993-101500 19930803.

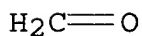
AB The method comprises (a) mixing together water, a water-dispersible
 org. polymeric **binder**, an inert inorg. aggregate, and a
 fibrous material to form an inorganically filled mixt. in which the
binder is substantially solvated in the water, the org.
 polymer **binder** and fibrous material together having concn.
 approx. 5-60 vol.% (based on total solids), (b) passing the mixt.
 between forming rollers to form a **sheet** having a desired
 thickness, and (c) evapg. a substantial portion of the water from
 the **sheet** to harden the **binder** in .ltorsim.10
 min after forming the **sheet**, thereby binding the aggregate
 and **fibers** in the **sheet** which then has a
 thickness of .ltorsim.1 cm. More specifically, the aggregate
 material has concn. approx. 40-98 vol.% (based on total solids).
 More specifically, (based on total solids) the inorg. aggregate
 material has concn. approx. 40-98, the org. polymer **binder**
 has concn. approx. 1-50, the fibrous material has concn. approx.
 0.5-50, and the water (based on the mixt.) has concn. approx. 5-50
 vol.%, and the final **sheet** has thickness .apprx.0.01 mm
 to .apprx.1 cm. More specifically, the **binder** and fibrous
 material have combined concn. approx. 5-60 vol.% (based on total
 solids). Alternatively, the method comprises passing the mixt.

between forming rollers to form a **sheet** having thickness .ltorsim.1 mm. Alternatively, the aggregate material has concn. approx. 40-98 vol.% (based on total solids), and the **sheet** is rolled onto a spool. The rolled **sheets** are dried in an accelerated manner to form a substantially hardened **sheet**, such as by heated rollers and/or a drying chamber. The **sheets** may have properties substantially similar to **sheets** presently made from traditional materials, e.g., paper, cardboard, polystyrene, plastic, or metal. The **sheets** can be rolled, pressed, scored, perforated, folded, and **glued**, and are esp. suitable for the mass prodn. of containers, esp. food and beverage containers.

IT 9003-08-1D, Formaldehyde-melamine **copolymer**,
sulfonated
 (dispersant; composite **sheet** manuf. from aq. compns.
 contg. fibers and inorg. aggregate and org. polymeric
binder and)
 RN 9003-08-1 HCA
 CN 1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde (9CI) (CA
 INDEX NAME)
 CM 1
 CRN 108-78-1
 CMF C3 H6 N6



CM 2
 CRN 50-00-0
 CMF C H2 O



IC ICM B05D003-02
 ICS B29C067-20
 NCL 156242000
 CC 43-9 (Cellulose, Lignin, Paper, and Other Wood Products)
 Section cross-reference(s): 33, 58
 ST water dispersible org polymer **binder**; inert inorg
 aggregate polymer **binder**; fiber aggregate polymer
binder; **sheet fiber** aggregate polymer

binder; molding **sheet** container food beverage;
packaging material **sheet** food beverage

IT **Cement** (construction material)
(Sorel; composite **sheet** manuf. from aq. compns. contg.
fibers and inorg. aggregate and org. polymeric **binder**
and)

IT Gravel
Seed
(aggregate; composite **sheet** manuf. from aq. compns.
contg. fibers and org. polymeric **binder** and)

IT Clays, uses
Gelatins, uses
Granite, uses
Limestone, uses
Mica-group minerals, uses
Sand
Sandstone
Silica gel, uses
(aggregate; composite **sheet** manuf. from aq. compns.
contg. fibers and org. polymeric **binder** and)

IT **Cement** (construction material)
(aluminous; composite **sheet** manuf. from aq. compns.
contg. fibers and inorg. aggregate and org. polymeric
binder and)

IT Containers
(beverage; fiber- and inorg. aggregate- and org. polymeric
binder-contg. aq. compns. for **sheet** manuf. for)

IT **Glues**
(**binder**; composite **sheet** manuf. from aq.
compns. contg. fibers and inorg. aggregate and)

IT Caseins, uses
Collagens, uses
Polymers, uses
Prolamins
Proteins, general, uses
(**binders**; composite **sheet** manuf. from aq.
compns. contg. fibers and inorg. aggregate and)

IT Coating materials
(biodegradable; coated composite **sheet** manuf. from aq.
compns. contg. fibers and inorg. aggregate and org. polymeric
binder and)

IT Containers
(boxes; fiber- and inorg. aggregate- and org. polymeric
binder-contg. aq. compns. for manuf. of)

IT **Cement** (construction material)
(calcium aluminate and silicate and phosphate; composite
sheet manuf. from aq. compns. contg. fibers and inorg.
aggregate and org. polymeric **binder** and)

IT Synthetic **fibers**
(ceramic; composite **sheet** manuf. from aq. compns.
contg. fibers and inorg. aggregate and)

IT Ceramic coatings

- (coated composite **sheet** manuf. from aq. compns. contg. fibers and inorg. aggregate and org. polymeric **binder** and)
- IT Polyoxyalkylenes, uses
(coated composite **sheet** manuf. from aq. compns. contg. fibers and inorg. aggregate and org. polymeric **binder** and coated with)
- IT Kaolin, uses
(coating material; coated composite **sheet** manuf. from aq. compns. contg. fibers and inorg. aggregate and org. polymeric **binder** and)
- IT Viscoelastic materials
(coating materials; coated composite **sheet** manuf. from aq. compns. contg. fibers and inorg. aggregate and org. polymeric **binder** and)
- IT Acrylic polymers, uses
Edible oils
Polyurethanes, uses
Waxes
(coating materials; coated composite **sheet** manuf. from aq. compns. contg. fibers and inorg. aggregate and org. polymeric **binder** and)
- IT Latex
(composite **sheet** manuf. from aq. compns. contg. fibers and inorg. aggregate and)
- IT Carbon **fibers**, uses
Glass **fibers**, uses
Metallic **fibers**
(composite **sheet** manuf. from aq. compns. contg. fibers and inorg. aggregate and)
- IT Dispersing agents
(composite **sheet** manuf. from aq. compns. contg. fibers and inorg. aggregate and org. polymeric **binder** and)
- IT Bagasse
Cannabis
Cellulose pulp
Cotton
Flax
Manila hemp (*Musa textilis*)
Pine (*Pinus palustris*)
Pine (*Pinus rigida*)
(composite **sheet** manuf. from aq. compns. contg. inorg. aggregate and org. polymeric **binder** and)
- IT **Fibers**
(composite **sheet** manuf. from aq. compns. contg. inorg. aggregate and org. polymeric **binder** and)
- IT Containers
(cups; fiber- and inorg. aggregate- and org. polymeric **binder**-contg. aq. compns. for manuf. of)
- IT Household furnishings
(dishes, trays, clam shells; fiber- and inorg. aggregate- and org. polymeric **binder**-contg. aq. compns. for manuf. of)

IT Microwave ovens
Vacuum chambers
(drying in; composite **sheet** manuf. from aq. compns.
contg. fibers and inorg. aggregate and org. polymeric
binder)

IT Geological materials
(expanded, lightwt. aggregate; composite **sheet** manuf.
from aq. compns. contg. fibers and org. polymeric **binder**
and)

IT **Laminated** materials
(**fiber**- and inorg. aggregate- and org. polymeric
binder-contg. aq. compns. for **sheet** manuf. for)

IT Ceramics
(**fibers**; composite **sheet** manuf. from aq.
compns. contg. fibers and inorg. aggregate and)

IT Packaging materials
(films, printable; **sheets** manufd. from **fiber**-
and inorg. aggregate- and org. polymeric **binder**-contg.
aq. compns.)

IT Metals, uses
(foils; laminates contg. **sheets** manufd. from
fiber- and inorg. aggregate- and org. polymeric
binder-contg. aq. compns. and)

IT Containers
(food; fiber- and inorg. aggregate- and org. polymeric
binder-contg. aq. compns. for **sheet** manuf. for)

IT Gels
(inorg., aggregate; composite **sheet** manuf. from aq.
compns. contg. fibers and org. polymeric **binder** and)

IT Aggregates
(inorg.; composite **sheet** manuf. from aq. compns. contg.
fibers and org. polymeric **binder** and)

IT Cellophane
Nonwoven fabrics
Textiles
(laminates contg. **sheets** manufd. from **fiber**-
and inorg. aggregate- and org. polymeric **binder**-contg.
aq. compns. and)

IT Ionomers
Plastic films
(laminates contg. **sheets** manufd. from **fiber**-
and inorg. aggregate- and org. polymeric **binder**-contg.
aq. compns. and)

IT Glass microspheres
Perlite
Pumice
(lightwt. aggregate; composite **sheet** manuf. from aq.
compns. contg. fibers and org. polymeric **binder** and)

IT Aggregates
(lightwt.; composite **sheet** manuf. from aq. compns.
contg. fibers and org. polymeric **binder** and)

IT Foils

- (metal and metalized; laminates contg. **sheets** manufd. from **fiber**- and inorg. aggregate- and org. polymeric **binder**-contg. aq. compns. and)
- IT Colloids
(phycocolloids, **binders**; composite **sheet** manuf. from aq. compns. contg. fibers and inorg. aggregate and)
- IT Ceramics
(porous, microspheres, lightwt. aggregate; composite **sheet** manuf. from aq. compns. contg. fibers and org. polymeric **binder** and)
- IT **Cement** (construction material)
(portland; composite **sheet** manuf. from aq. compns. contg. fibers and inorg. aggregate and org. polymeric **binder** and)
- IT Materials
(**sheet**; **fiber**- and inorg. aggregate- and org. polymeric **binder**-contg. aq. compns. for manuf. of)
- IT Polyamides, uses
(**sheets**; laminates contg. **sheets** manufd. from **fiber**- and inorg. aggregate- and org. polymeric **binder**-contg. aq. compns. and)
- IT Synthetic **fibers**
(silica; composite **sheet** manuf. from aq. compns. contg. fibers and inorg. aggregate and)
- IT **Cement** (construction material)
(slag; composite **sheet** manuf. from aq. compns. contg. fibers and inorg. aggregate and org. polymeric **binder** and)
- IT Proteins, general, uses
(soybean, coating materials; coated composite **sheet** manuf. from aq. compns. contg. fibers and inorg. aggregate and org. polymeric **binder** and)
- IT Aminoplasts
(sulfonated, dispersant; composite **sheet** manuf. from aq. compns. contg. fibers and inorg. aggregate and org. polymeric **binder** and)
- IT Surface structure
(textured **sheets** manufd. from **fiber**- and inorg. aggregate- and org. polymeric **binder**-contg. aq. compns.)
- IT 7631-86-9, Silica, uses 9002-18-0, Agar 13397-24-5, Gypsum, uses
(aggregate; composite **sheet** manuf. from aq. compns. contg. fibers and org. polymeric **binder** and)
- IT 9000-01-5, **Gum** arabic 9000-30-0, Guar **gum**
9000-36-6, **Gum** karaya 9000-40-2, Locust bean **gum**
9000-65-1, **Gum** tragacanth 9003-01-4, Poly(acrylic acid)
9003-05-8, Polyacrylamide 9003-09-2, Polyvinylmethyl ether
9003-39-8, Poly(vinyl pyrrolidone) 9004-32-4,
Carboxymethylcellulose 9004-53-9, Dextrin 9004-57-3,
Ethylcellulose 9004-62-0, Hydroxyethylcellulose 9004-67-5,
Methylcellulose 9005-25-8D, Starch, amine derivs., uses
9005-25-8D, Starch, long-chain alkyl derivs., uses 9005-27-0,

Starch hydroxyethyl ether 9005-32-7, Alginic acid 9005-82-7,
 Amylose 9032-42-2, Methylhydroxyethylcellulose 9037-22-3,
 Amylopectin 9045-28-7, Starch acetate 9047-50-1, Dialdehyde
 starch 11120-02-8 83589-39-3 109944-73-2

(**binder**; composite **sheet** manuf. from aq.
 compns. contg. fibers and inorg. aggregate and)

IT 79-10-7D, 2-Propenoic acid, salts, polymers, uses 79-10-7D,
 2-Propenoic acid, vinyl derivs., salts, polymers, uses

(**binders**; composite **sheet** manuf. from aq.
 compns. contg. fibers and inorg. aggregate and)

IT 79-10-7D, 2-Propenoic acid, esters, uses 471-34-1, Calcium
 carbonate, uses 1344-09-8, Sodium silicate 1344-28-1, Aluminum
 oxide (Al₂O₃), uses 7631-86-9D, Silica, oxygen-deficient, uses
 9002-86-2, Poly(vinyl chloride) 9002-88-4, Polyethylene
 9002-89-5, Poly(vinyl alcohol) 9003-20-7, Poly(vinyl acetate)
 9004-65-3, Hydroxypropylmethylcellulose 9005-25-8, Starch, uses
 25322-68-3 26100-51-6, Polylactic acid

(coated composite **sheet** manuf. from aq. compns. contg.
 fibers and inorg. aggregate and org. polymeric **binder**
 and coated with)

IT 26499-65-0, Plaster of Paris
 (composite **sheet** manuf. from aq. compns. contg. fibers
 and inorg. aggregate and org. polymeric **binder** and)

IT 9003-08-1D, Formaldehyde-melamine **copolymer**,
sulfonated 9017-33-8, Naphthalenesulfonic
 acid-formaldehyde copolymer
 (dispersant; composite **sheet** manuf. from aq. compns.
 contg. fibers and inorg. aggregate and org. polymeric
binder and)

IT 8062-15-5D, Lignosulfonic acid, salts
 (dispersants; composite **sheet** manuf. from aq. compns.
 contg. fibers and inorg. aggregate and org. polymeric
binder and)

IT 1335-30-4, Aluminum silicate 1344-95-2, Calcium silicate
 (gel, aggregate; composite **sheet** manuf. from aq.
 compns. contg. fibers and org. polymeric **binder** and)

IT 1318-00-9, Vermiculite
 (lightwt. aggregate; composite **sheet** manuf. from aq.
 compns. contg. fibers and org. polymeric **binder** and)

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124:31962 Polyols and polymers of unsaturated acids or anhydrides in
 binding or **coating** compositions for **fibrous**
sheets. Seyffer, Hermann; Rupaner, Robert; Guenther,
 Erhard; Hummerich, Rainer (BASF A.-G., Germany). Eur. Pat. Appl. EP
 672720 A1 19950920, 13 pp. DESIGNATED STATES: R: BE, DE, FR, GB,
 IT, NL. (German). CODEN: EPXXDW. APPLICATION: EP 1995-103372
 19950309. PRIORITY: DE 1994-4408688 19940315.

AB A triazine ring-contg. polyol [e.g., N,N',N''-tris(2-
 hydroxyethyl)melamine or THEIC] and a polymer of an unsatd. acid or
 anhydride [e.g., poly(methacrylic acid), acrylic acid-maleic acid
 copolymer, or acrylonitrile-Bu acrylate-methacrylic acid copolymer]

are used in crosslinkable binding or **coating** compns. for **fibrous** materials such as nonwoven glass fiber fleeces. Fibrous materials bonded with the compns. are useful in asphalt shingles, floor coverings, filtering materials, battery separators, etc.

IT **171849-74-4**, Acrylic acid-N,N'-Bis(2-hydroxyethyl)melamine-N-(2-hydroxyethyl)melamine-maleic acid-N,N',N''-tris(2-hydroxyethyl)melamine copolymer
(crosslinked binding material for **fibrous sheets**)

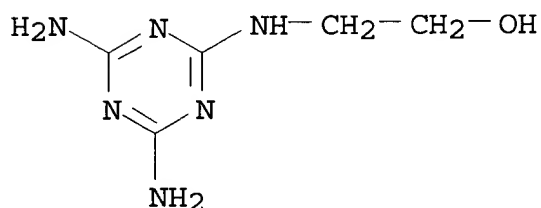
RN 171849-74-4 HCA

CN 2-Butenedioic acid (2Z)-, polymer with 2,2'-[(6-amino-1,3,5-triazine-2,4-diyl)diimino]bis[ethanol], 2-[(4,6-diamino-1,3,5-triazin-2-yl)amino]ethanol, 2-propenoic acid and 2,2',2''-(1,3,5-triazine-2,4,6-triyltriimino)tris[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 5606-26-8

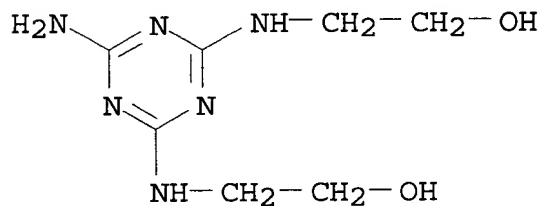
CMF C5 H10 N6 O



CM 2

CRN 5606-19-9

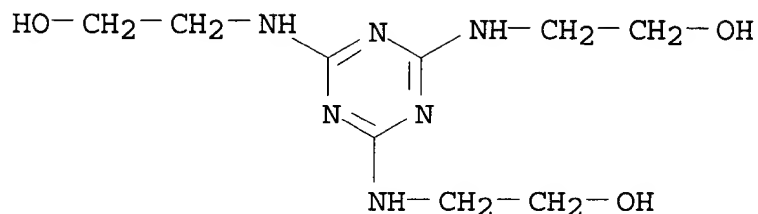
CMF C7 H14 N6 O2



CM 3

CRN 4403-07-0

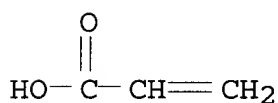
CMF C9 H18 N6 O3



CRN 110-16-7
CMF C4 H4 O4

OC(=O)/C=C/C(=O)O

CRN 79-10-7
CMF C3 H4 O2



IC ICM C08L057-04
ICS C08L071-02; C08K005-04; D04H001-64; D06M015-263; C08J003-24
CC 40-10 (Textiles and Fibers)
Section cross-reference(s): 37, 38
ST methacrylic acid polymer polyol **binder**; acrylic acid
polymer polyol **binder**; melamine hydroxyethyl
polycarboxylic **binder** fiber; hydroxyethylmelamine
polycarboxylic **binder** fiber; crosslinking polycarboxylic
polyol **binder** fiber; glass fleece **binder**
polycarboxylic polyol; **carboxy polymer** polyol
crosslinking **binder**; **coating** polycarboxylic
polyol **fiber sheet**
IT Crosslinking
(of polycarboxylic acid-polyol mixts. as **binders** for
fibrous sheets)
IT Binding materials
(polycarboxylic acids and polyols in crosslinkable

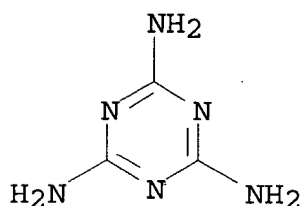
- binders for fibrous sheets)**
- IT Impregnating materials
(polycarboxylic acids and polyols in crosslinkable
binders for impregnating fibrous sheets
)
- IT Glass fibers, miscellaneous
(polycarboxylic acids and polyols in crosslinkable
binders for sheets of)
- IT Coating materials
(polycarboxylic acids and polyols in crosslinkable
coatings for fibrous sheets)
- IT Crosslinking agents
(polyols; for (meth)acrylic acid polymers as **binders**
for **fibrous sheets**)
- IT 171849-68-6, Methacrylic acid-N,N',N''-tris(5-hydroxy-3-oxapentyl)melamine copolymer 171849-69-7, Methacrylic acid-N,N',N''-tris(2-hydroxyethyl)melamine copolymer 171849-70-0, Methacrylic acid-N,N',N''-tris(2-hydroxyethyl)isocyanurate copolymer 171849-71-1, N,N,N',N',N'',N''-Hexakis(2-hydroxyethyl)melamine-methacrylic acid copolymer 171849-72-2, N,N'-Bis(2-hydroxyethyl)melamine-N-(2-hydroxyethyl)melamine-methacrylic acid-N,N',N''-tris(2-hydroxyethyl)melamine copolymer 171849-73-3, Acrylic acid-N,N'-Bis(2-hydroxyethyl)melamine-N-(2-hydroxyethyl)melamine-N,N',N''-tris(2-hydroxyethyl)melamine copolymer **171849-74-4**, Acrylic acid-N,N'-Bis(2-hydroxyethyl)melamine-N-(2-hydroxyethyl)melamine-maleic acid-N,N',N''-tris(2-hydroxyethyl)melamine copolymer 171849-75-5, Acrylonitrile-N,N'-Bis(2-hydroxyethyl)melamine-butyl acrylate-N-(2-hydroxyethyl)melamine-methacrylic acid-N,N',N''-tris(2-hydroxyethyl)melamine copolymer
(crosslinked binding material for **fibrous sheets**)
- L57 ANSWER 13 OF 37 HCA COPYRIGHT 2002 ACS
- 123:173257 Manufacturing pressed **sheets** from natural and(or) synthetic polymeric fibers for gaskets. Starzak, Marian; Lubecka, Marianna; Szabunio, Romuald; Lukjanow, Jacek (Osrodek Badawczo-Rozwojowy Kauczukow i Tworzyw Winylowych, Pol.). Pol. PL 163812 B1 19940531, 3 pp. (Polish). CODEN: POXXA7. APPLICATION: PL 1990-288178 19901210.
- AB Pressed **sheets** from .gtoreq.1 of asbestos, cellulosic, glass, polyamide, and polyester fibers and mineral fillers are manufd. using carboxylated acrylonitrile-butadiene latex modified by methylol group-contg. resins such as melamine resins so that .gtoreq.20% of the carboxyl groups of the latex polymer are reacted with the methylol groups of the resin.
- IT **9003-08-1D**, Melamine resin, reaction products with **carboxylated acrylonitrile-butadiene copolymers**
(pressed **sheets** from natural and(or) synthetic polymeric fibers for gaskets)
- RN 9003-08-1 HCA
- CN 1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde (9CI) (CA

INDEX NAME)

CM 1

CRN 108-78-1

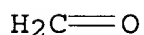
CMF C3 H6 N6



CM 2

CRN 50-00-0

CMF C H2 O



IC ICM D21H017-20
 CC 43-9 (Cellulose, Lignin, Paper, and Other Wood Products)
 ST asbestos synthetic paperboard gasket; melamine resin adduct
 synthetic paperboard; butadiene **copolymer**
carboxylated synthetic paperboard; acrylonitrile
copolymer carboxylated synthetic paperboard; glass
 synthetic paperboard gasket; polyamide synthetic paperboard gasket;
 polyester synthetic paperboard gasket
 IT Asbestos
 (fibers; pressed **sheets** from natural and(or)
 synthetic polymeric fibers for gaskets)
 IT Gaskets
 Paperboard
 (pressed **sheets** from natural and(or) synthetic
 polymeric fibers for gaskets)
 IT Glass **fibers**, uses
 Polyamide **fibers**, uses
 Polyester **fibers**, uses
 (pressed **sheets** from natural and(or) synthetic
 polymeric fibers for gaskets)
 IT 9003-18-3D, Acrylonitrile-butadiene **copolymer**,
carboxylated, reaction products with melamine resins
 (binder; pressed **sheets** from natural and(or)
 synthetic polymeric fibers for gaskets)
 IT 9003-08-1D, Melamine resin, reaction products with
carboxylated acrylonitrile-butadiene **copolymers**
 (pressed **sheets** from natural and(or) synthetic

polymeric fibers for gaskets)

L57 ANSWER 14 OF 37 HCA COPYRIGHT 2002 ACS

122:136265 Aqueous resin dispersions and metallic coatings incorporating them. Takayanagi, Hitoshi (Dainippon Ink & Chemicals, Japan). Jpn. Kokai Tokkyo Koho JP 06212049 A2 19940802 Heisei, 15 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1993-6655 19930119.

AB The dispersions are obtained by an addn. reaction between mutually addn.-reactive resins (e.g., acrylic or epoxy resins contg. glycidyl groups and acrylic **resins** contg. **carboxyl** groups) to give **carboxy**-contg. graft **copolymers**, dispersing the graft polymers in an aq. medium by phase reversal, and polyng. hydrophobic monomers in the aq. dispersion; the dispersions are mixed with **crosslinkers** and metallic pigments to give water-thinned metallic coatings. Thus, 10 parts Me methacrylate and 10 parts Bu acrylate were polymd. in an aq. dispersion of 80 parts 3:1 addn. products of Bu acrylate-glycidyl methacrylate-2-hydroxyethyl methacrylate-iso-Bu methacrylate-Me methacrylate-styrene copolymer and Et acrylate-methacrylic acid-styrene copolymer in the presence of (NH₄)₂S₂O₈ to give an aq. dispersion with 36.8% solids, which was mixed with Al paste, butoxymethylated melamine resin as **crosslinker**, and a thickening agent to give a metallic coating. A bonderized soft steel **sheet** coated successively with an epoxy **resin**-based **cationic** electrodeposition coat, an amino polyester intermediate coat, the metallic coat, and finally an acrylic clear coat showed a good metallic appearance.

IC ICM C08L051-08

ICA C08F265-06; C08G081-02

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 35

ST metallic coating aq dispersion; glycidyl **carboxy** graft **polymer** dispersion; vinyl polymn graft polymer dispersion

IT Coating materials

(metallic; aq. dispersions of acrylic polymers and graft copolymers from glycidyl-contg. acrylic **polymers** and **carboxy**-contg. acrylic **polymers** as **binders** for)

IT 111202-37-0P 161004-09-7P

(aq. dispersions; mixts. with Bu acrylate-Me methacrylate copolymers as **binders** for water-thinned metallic coatings)

IT 25852-37-3P, n-Butyl acrylate-methyl methacrylate copolymer (aq. dispersions; mixts. with graft copolymers from glycidyl-contg. acrylic **polymers** and **carboxy**-contg. acrylic **polymers** as **binders** for water-thinned metallic coatings)

IT 161004-10-0P

(mixts. with Bu acrylate-Me methacrylate copolymers as **binders** for water-thinned metallic coatings)

L57 ANSWER 15 OF 37 HCA COPYRIGHT 2002 ACS

- 121:58806 Room-temperature curable, machinable, high-strength epoxy tooling compositions. Dearlove, Thomas J.; Atkins, Richard P.; Wang, Chen Shih (General Motors Corp., USA). U.S. US 5280053 A 19940118, 6 pp. Cont.-in-part of U.S. Ser. No. 880,382, abandoned. (English). CODEN: USXXAM. APPLICATION: US 1993-26913 19930305. PRIORITY: US 1992-880382 19920508.
- AB A compn. for machinable, mass-castable and cast-to-size, high-strength epoxy tools for metal **sheet** prototype stamping, comprises a polymeric reaction product of a mixt. contg. a bisphenol A epoxy 5-12, .gtoreq.1 polyoxypropylene amine curing agent 3-8, a mixt. of .gtoreq.3 different sized particulate fillers (the major portion of which is Fe powder) 60-85, short (<250 .mu.m) glass fibers 5-15, and a surface active agent 0.02-1%. The interstitially-matched filler system in which smaller particulate fillers fit in the interstitial spacing left by the larger particles serves as a heat sink for the curing heat and the compn. cures rapidly (.ltoreq.24 h) at room temp.
- IC ICM C08K003-34
ICS C08K003-40; C08L063-02
- NCL 523435000
- CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 38
- ST epoxy stamping tool compn; **sheet** metal stamping epoxy tool compn; Jeffamine curing agent epoxy tool compn; iron powder filler epoxy stamping tool; glass fiber filler epoxy stamping tool
- IT **Crosslinking** agents
(polyoxyalkyleneamines, epoxy tooling compns. contg., room-temp.-curable, machinable, high-strength)
- IT Polyoxyalkylenes, uses
(epoxy, amino-contg., **binders**, for room-temp.-curable, machinable, high-strength tooling compns.)
- IT Epoxy **resins**, uses
(polyoxyalkylene-, **amino**-contg., **binders**, for room-temp.-curable, machinable, high-strength tooling compns.)
- IT Tools
(stamping, high-strength epoxy compn. for machinable, for metal **sheets**)
- IT 106-49-0D, p-Aminotoluene, adducts with (epoxycyclohexyl)methyl epoxycyclohexane **carboxylate** 2386-87-0D, (3,4-Epoxycyclohexyl)methyl 3,4-epoxycyclohexane carboxylate, aminotoluene adducts
(epoxy **resin** modifiers, tooling compn. contg., machinable, high-strength)
- L57 ANSWER 16 OF 37 HCA COPYRIGHT 2002 ACS
- 120:33178 A new concept for manufacture of light-weight coated paper. Winter, Lars; Westerlund, Alf; Wagberg, Lars; Kolar, Katarina (SCA Ortviken Ab, Swed.). Industria della Carta, 31(4), 171-5 (Italian) 1993. CODEN: ICAMA4. ISSN: 0019-7548.
- AB Addn. of cationic/anionic sequestering polyelectrolytes to bleaching baths of thermomech. pulps in manuf. of light-wt. coated (LWC) paper, led to removal of most of anionic species and particulates.

Addn. of cationic retention aids to **sheet pastes**, enhanced **fiber** retention. The **cationic polymers** tested included Polydadmac, polyacrylamides, and polyethylenimines. Cationic/**anionic** agents include **Polymin SK** (polyethylenimine) and Polymin AE 70 (polyacrylamide). The **polymeric cationic** and **cationic/anionic** agents led to better particulate removal and COD flocculation than alum and talc, currently used in in LWC processes.

CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)
Section cross-reference(s): 42

IT 89126-80-7, **Polymin SK** 152060-05-4, Polymin AE 70
(flocculant, **cationic** polyelectrolyte, in manuf. of
light-wt. coated paper)

L57 ANSWER 17 OF 37 HCA COPYRIGHT 2002 ACS

119:237954 Electrophotographic material for color proofing. Kato, Eiichi; Osawa, Sadao (Fuji Photo Film Co., Ltd., Japan). Eur. Pat. Appl. EP 534479 A1 19930331, 165 pp. DESIGNATED STATES: R: DE, GB. (English). CODEN: EPXXDW. APPLICATION: EP 1992-116494 19920925. PRIORITY: JP 1991-249819 19910927; JP 1991-259430 19911007; JP 1991-289648 19911106; JP 1991-289649 19911106.

AB An electrophotog. material for color proofing comprises a substrate, a photoconductive layer and a transfer layer in this order, and is used for prepg. a color proof in a process wherein at least one color toner image is electrophotog. formed on the transfer layer and then transferred together with said transfer layer to a **sheet** material to prep. the color proof, wherein said photoconductive layer comprises a copolymer and/or a crosslinked polymer particle which contain units having F atom(s) and/or Si atom(s) at least in the region near the surface facing said transfer layer and the surface of said photoconductive layer which contacts with the transfer layer has tack strength of .ltoreq.150 g .cntdot. force, which is measured by Pressure Sensitive Tape and **Sheet** Test of JIS Z0237-1980.

IT **150625-03-9P 150625-82-4P 150625-83-5P**
150625-84-6P 150642-29-8P

(prepn. and use of, in electrophotog. plate, for reduced tack)

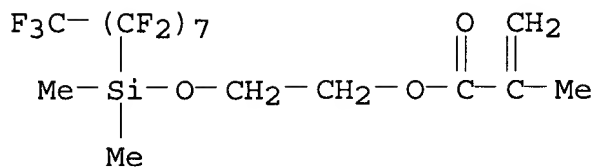
RN 150625-03-9 HCA

CN 2-Propenoic acid, 2-methyl-, 2-[[[(heptadecafluorooctyl)dimethylsilyl]oxy]ethyl ester, polymer with phenylmethyl 2-methyl-2-propenoate and 2-(phosphonooxy)ethyl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

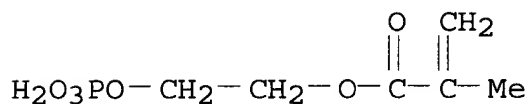
CRN 150625-02-8

CMF C16 H15 F17 O3 Si



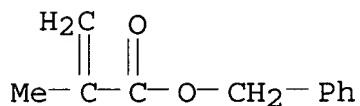
CM 2

CRN 24599-21-1
CMF C6 H11 O6 P



CM 3

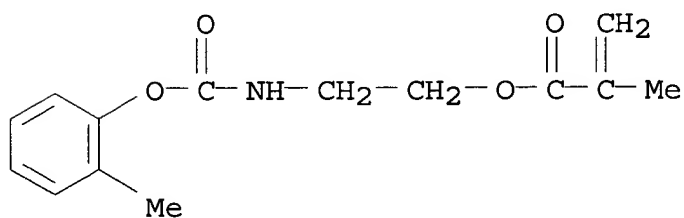
CRN 2495-37-6
CMF C11 H12 O2



RN 150625-82-4 HCA
CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with ethyl 2-methyl-2-propenoate, 2-[[[(2-methylphenoxy)carbonyl]amino]ethyl 2-methyl-2-propenoate, 2-(phosphonoxy)ethyl 2-methyl-2-propenoate and 3-(undecamethylpentasiloxanyl)propyl 2-methyl-2-propenoate, block, graft (9CI) (CA INDEX NAME)

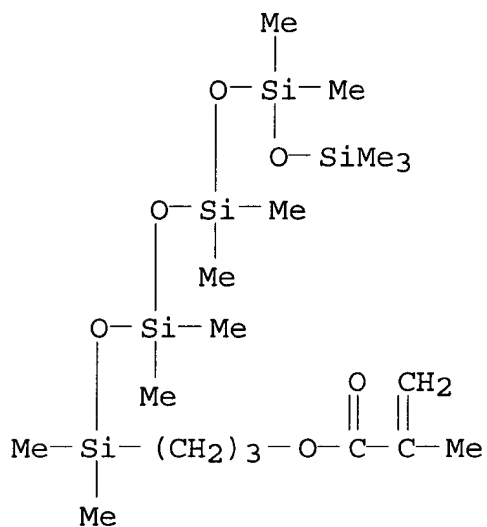
CM 1

CRN 150625-81-3
CMF C14 H17 N O4



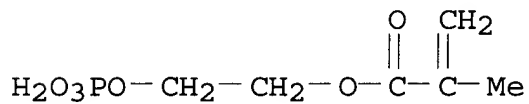
CM 2

CRN 107642-12-6
 CMF C18 H44 O6 Si5



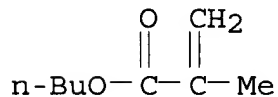
CM 3

CRN 24599-21-1
 CMF C6 H11 O6 P



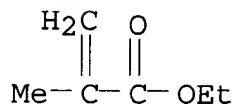
CM 4

CRN 97-88-1
 CMF C8 H14 O2



CM 5

CRN 97-63-2
 CMF C6 H10 O2



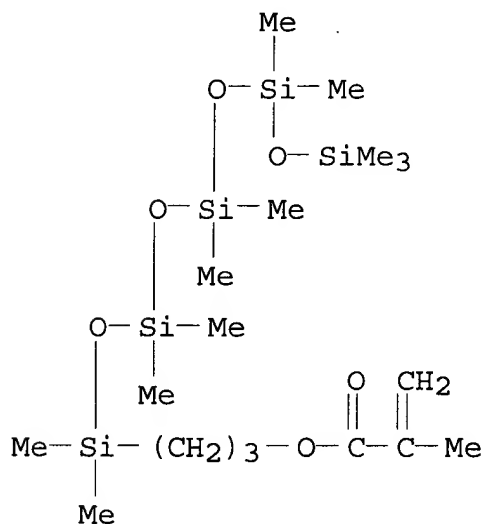
RN 150625-83-5 HCA

CN 2-Propenoic acid, 2-methyl-, ethyl ester, polymer with
 2-[[[(3-isocyanato-4-methylphenyl)amino]carbonyl]oxy]ethyl
 2-methyl-2-propenoate, phenylmethyl 2-methyl-2-propenoate,
 4-sulfobutyl 2-methyl-2-propenoate and 3-
 (undecamethylpentasiloxanyl)propyl 2-methyl-2-propenoate, block,
 graft (9CI) (CA INDEX NAME)

CM 1

CRN 107642-12-6

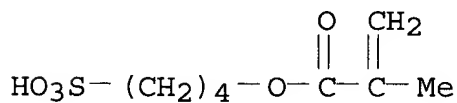
CMF C18 H44 O6 Si5



CM 2

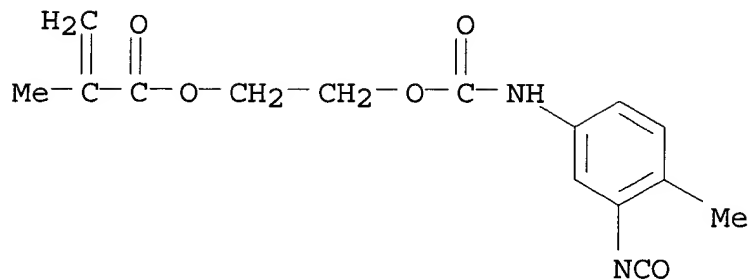
CRN 50985-35-8

CMF C8 H14 O5 S



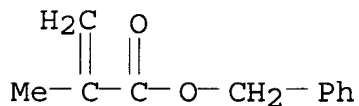
CM 3

CRN 47241-20-3
CMF C15 H16 N2 O5



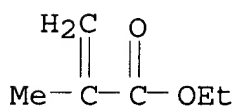
CM 4

CRN 2495-37-6
CMF C11 H12 O2



CM 5

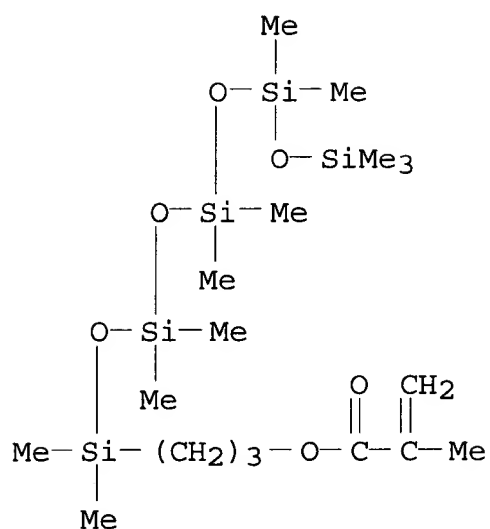
CRN 97-63-2
CMF C6 H10 O2



RN 150625-84-6 HCA
CN 2-Propenoic acid, 2-methyl-, 2,3-dihydroxypropyl ester, polymer with aziridine, 4,5-dihydro-2-pentyloxazole, ethyl 2-methyl-2-propenoate and 3-(undecamethylpentasiloxanyl)propyl 2-methyl-2-propenoate, block, graft (9CI) (CA INDEX NAME)

CM 1

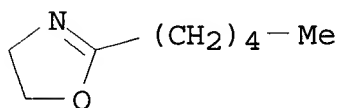
CRN 107642-12-6
CMF C18 H44 O6 Si5



CM 2

CRN 16101-88-5

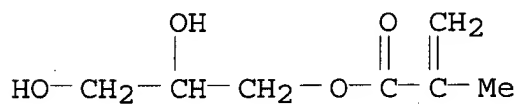
CMF C8 H15 N O



CM 3

CRN 5919-74-4

CMF C7 H12 O4



CM 4

CRN 151-56-4

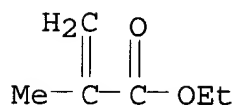
CMF C2 H5 N



CM 5

CRN 97-63-2

CMF C6 H10 O2



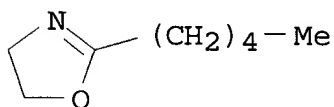
RN 150642-29-8 HCA

CN 2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl ester, polymer with aziridine and 4,5-dihydro-2-pentyloxazole, graft (9CI) (CA INDEX NAME)

CM 1

CRN 16101-88-5

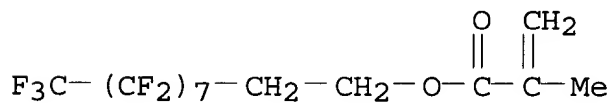
CMF C8 H15 N O



CM 2

CRN 1996-88-9

CMF C14 H9 F17 O2



CM 3

CRN 151-56-4

CMF C2 H5 N



IC ICM G03G013-01
ICS G03F003-10

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT Electrophotographic photoconductors and photoreceptors
(for color proofing, photosensitive compn. for, reduced-tack, **binder** in)

IT 79-10-7DP, 2-Propenoic acid, fluoroalkyl derivs., polymers with methacrylates 79-10-7DP, 2-Propenoic acid, polymers with (meth)acrylates, block 79-41-4DP, fluoroalkyl esters, polymers with methacrylates and acrylates, block or graft 80-62-6DP, polymers with (meth)acrylates, block or graft 96-33-3DP, polymers with (meth)acrylates, block or graft 97-63-2DP, polymers with (meth)acrylates, block or graft 106-91-2DP, polymers with (meth)acrylates, block 2170-03-8DP, polymers with (meth)acrylates, block 2210-28-8DP, polymers with (meth)acrylates, block 4245-37-8DP, polymers with (meth)acrylates, block 5919-74-4DP, polymers with (meth)acrylates, block 30674-80-7DP, polymers with (meth)acrylates, block 45168-50-1DP, polymers with (meth)acrylates, block-graft 51636-06-7DP, polymers with (meth)acrylates, block 63740-41-0DP, polymers with (meth)acrylates, block 72537-60-1DP, polymers with (meth)acrylates, block 144541-84-4P 150551-94-3DP, polymers with (meth)acrylates, block 150624-67-2P 150624-68-3P 150624-69-4P 150624-71-8P 150624-73-0P 150624-74-1P 150624-76-3P 150624-77-4P 150624-79-6P 150624-81-0P 150624-83-2P 150624-85-4P 150624-87-6P 150624-88-7P 150624-90-1P 150624-91-2P 150624-92-3P 150624-93-4P 150624-94-5P 150624-95-6P 150624-96-7P 150624-98-9P 150625-00-6P 150625-01-7P **150625-03-9P** 150625-04-0P 150625-05-1P 150625-07-3P 150625-08-4P 150625-09-5P 150625-11-9P 150625-13-1P 150625-15-3P 150625-16-4P 150625-17-5P 150625-18-6P 150625-19-7P 150625-21-1P 150625-73-3P 150625-74-4P 150625-77-7P 150625-78-8P 150625-79-9P 150625-80-2P **150625-82-4P** **150625-83-5P** **150625-84-6P** 150625-86-8P 150625-87-9P 150625-89-1P 150625-90-4P 150625-91-5P 150625-92-6P 150625-94-8P 150625-95-9P 150625-96-0P 150625-98-2P 150626-00-9P 150642-09-4P 150642-10-7P 150642-11-8P 150642-13-0DP, polymers with methacrylate-terminated dimethylsiloxane 150642-14-1P 150642-15-2P 150642-16-3DP, hydrolyzed 150642-18-5DP, hydrolyzed 150642-19-6P 150642-20-9P 150642-22-1P 150642-23-2P 150642-24-3P 150642-25-4P 150642-26-5P 150642-27-6P 150642-28-7P **150642-29-8P** 150642-30-1P 150642-31-2P 150642-32-3P 150642-33-4P 150642-34-5P 150642-35-6P 150642-36-7P 150642-37-8P 150642-38-9P 150642-39-0P

150642-40-3P	150642-41-4P	150642-42-5P	150642-43-6P
150642-44-7P	150642-45-8P	150642-46-9P	150642-47-0P
150642-55-0P	150642-56-1P	150642-57-2P	150642-58-3P
150642-59-4P	150642-60-7P	150642-61-8P	150642-62-9P
150642-63-0P	150642-64-1P	150642-66-3P	150642-67-4P
150642-68-5P	150642-71-0P	150642-72-1P	150642-73-2P
150652-03-2P	150669-89-9P	150737-10-3P	150737-11-4P
150737-95-4P	150737-96-5P	150773-23-2P	150773-24-3P
150773-26-5P	150773-28-7P	150773-30-1P	150773-31-2P
150773-32-3P	150773-34-5P	150773-35-6P	150773-37-8P
151038-14-1P	151038-16-3P	151038-18-5P	151038-20-9P
151038-21-0P	151078-64-7P	151115-20-7P	151115-21-8P

(prepn. and use of, in electrophotog. plate, for reduced tack)

L57 ANSWER 18 OF 37 HCA COPYRIGHT 2002 ACS

119:162515 Fireproof hydrolyzable silyl group-terminated polyoxyalkylene coating in joint structure. Miyaji, Kyoichi; Yasuda, Tetsuo; Iizuka, Hiroshi (National House Industrial Co., Ltd., Japan; Mitsui Kinzoku Paints and Chemicals Co., Ltd.). Jpn. Kokai Tokkyo Koho JP 05017718 A2 19930126 Heisei, 8 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1991-168452 19910709.

AB The coatings, applied on interior or exterior surfaces of substrates and/or seals, comprise hydrolyzable silyl-ended polyoxyalkylenes (A) 100, ammonium **polyphosphate** microencapsulated in **resins** 20-150, polyhydric alcs. 15-75, N-contg. gas-releasing (under heat) amines 5-50, and silanol condensation catalysts 0.1-10 parts. Thus, spreading a compn. contg. A (Kaneka MS), melamine **resin**-coated NH4 **polyphosphate** microcapsules, dipentaerythritol, melamine, and Sn dioctanoate catalyst on a U-shape galvanized steel panel, drying, **covering** with **fiber**-reinforced **cement** panels and sealing with a EPDM rubber **sheet** gave a product with water impermeability for 10 min at 25 kg/m2, vs. 5 min using an asbestos foam instead of the compn.

IT **9003-08-1**, Melamine **resin**
(ammonium **polyphosphate** microencapsulated in, fireproof coatings contg. silyl-terminated polyoxyalkylene and, for joints)

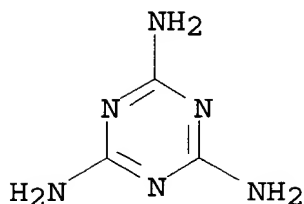
RN 9003-08-1 HCA

CN 1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde (9CI) (CA INDEX NAME)

CM 1

CRN 108-78-1

CMF C3 H6 N6



CM 2

CRN 50-00-0

CMF C H2 O

H₂C=O

IC ICM C09D171-02
 ICS C08K005-05; C08K005-16; C08K005-56; C08K005-57; C08K009-02;
 C08L071-02; E04B001-684; E04B001-94; E04F013-08
 CC 42-10 (Coatings, Inks, and Related Products)
 IT **9003-08-1, Melamine resin**
 (ammonium **polyphosphate** microencapsulated in, fireproof
 coatings contg. silyl-terminated polyoxyalkylene and, for joints)

L57 ANSWER 19 OF 37 HCA COPYRIGHT 2002 ACS

116:72202 Electrophotographic photoreceptor **sheets** for
 lithographic platemaking. Kato, Eiichi; Ishii, Kazuo (Fuji Photo
 Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 03017664 A2
 19910125 Heisei, 52 pp. (Japanese). CODEN: JKXXAF. APPLICATION:
 JP 1989-150485 19890615.

AB In the title photoreceptor **sheet** utilizing .gtoreq.1
 photoconductor layers contg. photoconductive ZnO and a
binder resin, the photoconductor layer contains hydrophilic
 resin particles of av. diam. equal to or smaller than the max. diam.
 of the ZnO particles, and the **binder** resin contains
 .gtoreq.1 1st-type resins contg. the structural repeating unit
 -[CHa1-Ca2(CO2R1)]- [a1, a2 = H, halo, alkyl, cyano; R1 =
 hydrocarbyl], having a wt. av. mol. wt. of 1 .times. 10³ - 2 .times.
 10⁴, and polar groups, and .gtoreq.1 2nd-type resins. The 2nd-type
 resin is a graft copolymer (wt. av. mol. wt. 3 .times. 10⁴ - 1
 .times. 10⁶) obtained from a monofunctional macromonomer selected
 from monomers contg. the structural repeating units
 -[CHa3-CHa4(X0-Q0)]- [X0 = CO₂, OCO, (CH₂)lOCO, (CH₂)lCO₂, O,
 CONHC₂, CONHCONH, SO₂, CO, CONR₂, SO₂NR₂ (R₂ = H, hydrocarbyl),
 substituted Ph; l = 1-3, Q0 = C1-18 aliph., C6-12 aliph.; a3, a4 =
 same as a1, a2 above] or -(CHa5 - CQ1a6)- [Q1 = cyano, CONH₂,
 substituted Ph; a5, a6 = same as a1, a2 above] having polymerizable
 C-C double bonds only at 1 end of the polymer chain and
 CHa7:Ca8(X1-Q2) [X1 = same as X0 above; Q2 = same as Q0 above; a7,

a8 = same as a1, a2 above].

IT 137560-93-1

(binder resin contg., for electrophotog. plate)

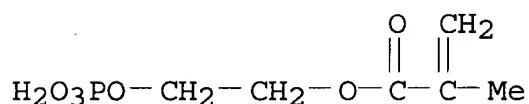
RN 137560-93-1 HCA

CN 2-Propenoic acid, 2-methyl-, phenyl ester, polymer with phenylmethyl
2-methyl-2-propenoate and 2-(phosphonooxy)ethyl 2-methyl-2-
propenoate, graft (9CI) (CA INDEX NAME)

CM 1

CRN 24599-21-1

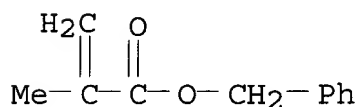
CMF C6 H11 O6 P



CM 2

CRN 2495-37-6

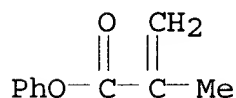
CMF C11 H12 O2



CM 3

CRN 2177-70-0

CMF C10 H10 O2



IT 131808-91-8 137560-70-4

(binder resin, electrophotog. plate using)

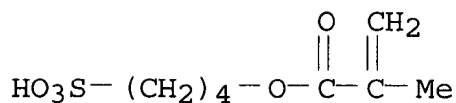
RN 131808-91-8 HCA

CN 2-Propenoic acid, 2-methyl-, ethyl ester, polymer with 4-sulfobutyl
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 50985-35-8

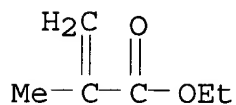
CMF C8 H14 O5 S



CM 2

CRN 97-63-2

CMF C6 H10 O2



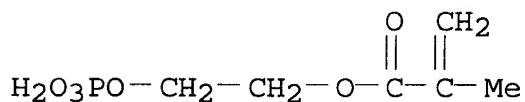
RN 137560-70-4 HCA

CN 2-Propenoic acid, 2-methyl-, phenyl ester, polymer with
2-(phosphonoxy)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 24599-21-1

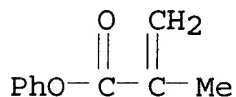
CMF C6 H11 O6 P



CM 2

CRN 2177-70-0

CMF C10 H10 O2



IT 137560-67-9

(latex contg., for hydrophilic resin particle prepn.)

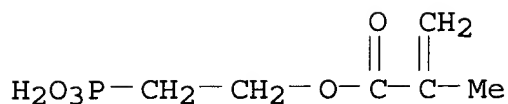
RN 137560-67-9 HCA

CN 2-Propenoic acid, 2-methyl-, dodecyl ester, polymer with
2-phosphonoethyl 2-methyl-2-propenoate and 2-propenoic acid, graft
(9CI) (CA INDEX NAME)

CM 1

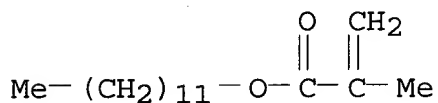
CRN 80730-17-2

CMF C6 H11 O5 P



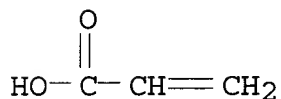
CM 2

CRN 142-90-5
CMF C16 H30 O2



CM 3

CRN 79-10-7
CMF C3 H4 O2



IT 137563-54-3

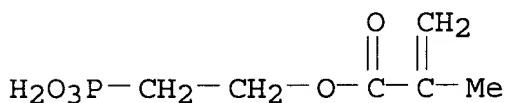
(latex from)

RN 137563-54-3 HCA

CN 2-Propenoic acid, 2-methyl-, dodecyl ester, polymer with
diethenylbenzene, 2-phosphonoethyl 2-methyl-2-propenoate and
2-propenoic acid, graft (9CI) (CA INDEX NAME)

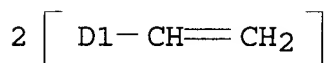
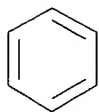
CM 1

CRN 80730-17-2
CMF C6 H11 O5 P



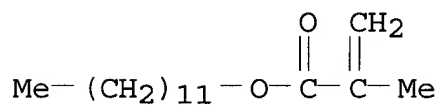
CM 2

CRN 1321-74-0
CMF C10 H10
CCI IDS



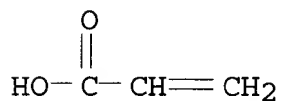
CM 3

CRN 142-90-5
CMF C16 H30 O2



CM 4

CRN 79-10-7
CMF C3 H4 O2



IT 124919-84-2

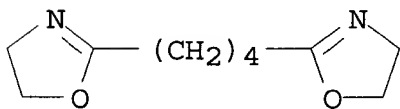
(resin particles of, electrophotog. plate using)

RN 124919-84-2 HCA

CN Oxazole, 2,2'-(1,4-butanediyl)bis[4,5-dihydro-, polymer with
4,5-dihydro-2-methyloxazole (9CI) (CA INDEX NAME)

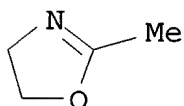
CM 1

CRN 36931-59-6
CMF C10 H16 N2 O2



CM 2

CRN 1120-64-5
CMF C4 H7 N O



IC ICM G03G013-28
ICS G03G005-05
ICA C08L051-00
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST **binder** electrophotog photoreceptor lithog plate
IT Lithographic plates
(electrophotog. plates, **binder** resin for)
IT Electrophotographic photoconductors and photoreceptors
(for lithog. plate making, **binder** resin for)
IT 9003-42-3 9011-87-4 25608-33-7 25685-29-4 26634-88-8
27027-40-3 28549-55-5 113547-51-6 121415-00-7 126969-94-6,
2-Chloro-6-methylphenylmethacrylate-methacrylic acid copolymer
128338-45-4 133685-69-5 137560-69-1 137560-79-3 137560-80-6
137560-81-7 137560-82-8 137560-83-9 137560-84-0 137560-85-1
137560-86-2 137560-87-3 137560-88-4 137560-89-5 137560-90-8
137560-91-9 137560-92-0 **137560-93-1** 138626-53-6
(**binder** resin contg., for electrophotog. plate)
IT 9003-42-3D, Ethylmethacrylate homopolymer, methacryloyl-terminated
9011-14-7D, methacryloyl-terminated 26284-14-0D,
Butylmethacrylate-methacrylic acid copolymer, methacryloyl-
terminated
(**binder** resin from)
IT 65697-21-4 126969-79-7 **131808-91-8** 137560-69-1
137560-70-4 137560-71-5 137560-72-6 137560-73-7
137560-76-0 137560-77-1 137560-78-2 137625-66-2 137991-51-6
137991-53-8
(**binder** resin, electrophotog. plate using)
IT 137285-64-4 137285-68-8 **137560-67-9**
(latex contg., for hydrophilic resin particle prepn.)
IT 27756-39-4 28062-60-4, Acrylic acid-dodecylmethacrylate copolymer
31212-98-3 86320-90-3 134158-43-3 137285-70-2 137560-68-0
137563-54-3
(latex from)
IT 33408-30-9D, reaction product with 1,6-hexamethyldicyanate
124919-84-2 127006-47-7 134158-49-9
(resin particles of, electrophotog. plate using)
L57 ANSWER 20 OF 37 HCA COPYRIGHT 2002 ACS
116:48824 Electrophotographic photoreceptor **sheet** for
lithographic platemaking. Kato, Eiichi; Ishii, Kazuo (Fuji Photo
Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 03046665 A2

19910227 Heisei, 39 pp. (Japanese). CODEN: JKXXAF. APPLICATION:
JP 1989-180559 19890714.

AB In the title electrophotog. photoreceptor **sheet** utilizing
.gtoreq.1 photoconductor layer contg. photoconductive ZnO and a
binder resin, the photoconductive layer contains hydrophilic
resin particles of av. diam. less than that of the ZnO particles,
and the **binder** resin contains .gtoreq.1 acrylate resin A
and .gtoreq.1 acrylate resin B. Acrylate resin A contains a polymer
component (wt.-av. mol. wt. 1 .times. 103-2 .times. 104) based on
CHa1:Ca2(CO2R1) [a1,a2 = H, halo, CN, hydrocarbyl; R1 = hydrocarbyl]
(I) .gtoreq.30% and a polymer component contg. polar groups selected
from PO3H2, SO3H, CO2H, P(O)(OH)R [R = hydrocarbyl, OR'(R' =
hydrocarbyl)], and cyclic acid anhydride-contg. group; and acrylate
resin B contains polymer component I (wt.-av. mol. wt. 3 .times.
104-1 .times. 106) .gtoreq.50% and the 2nd polymer component of
resin A 0-5%.

IT **131808-91-8 137560-70-4**
(**binder** resin contg., for electrophotog. photoreceptor
sheet for lithog. platemaking)

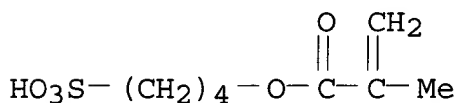
RN 131808-91-8 HCA

CN 2-Propenoic acid, 2-methyl-, ethyl ester, polymer with 4-sulfobutyl
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 50985-35-8

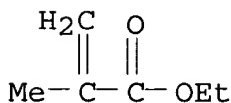
CMF C8 H14 O5 S



CM 2

CRN 97-63-2

CMF C6 H10 O2



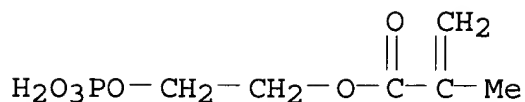
RN 137560-70-4 HCA

CN 2-Propenoic acid, 2-methyl-, phenyl ester, polymer with
2-(phosphonooxy)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

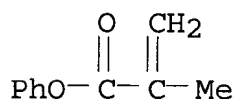
CRN 24599-21-1

CMF C6 H11 O6 P



CM 2

CRN 2177-70-0
CMF C10 H10 O2



IT 124919-84-2 137285-66-6 137285-71-3

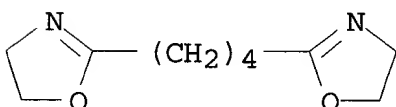
(resin particles from, for electrophotog. photoreceptor
sheets used in lithog. platemaking)

RN 124919-84-2 HCA

CN Oxazole, 2,2'-(1,4-butanediyl)bis[4,5-dihydro-, polymer with
4,5-dihydro-2-methyloxazole (9CI) (CA INDEX NAME)

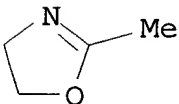
CM 1

CRN 36931-59-6
CMF C10 H16 N2 O2



CM 2

CRN 1120-64-5
CMF C4 H7 N O

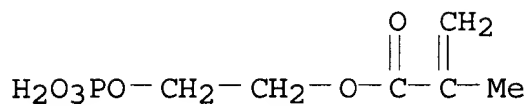


RN 137285-66-6 HCA

CN 2-Propenoic acid, 2-methyl-, dodecyl ester, polymer with
2-(phosphonoxy)ethyl 2-methyl-2-propenoate and 2-propenoic acid,
graft (9CI) (CA INDEX NAME)

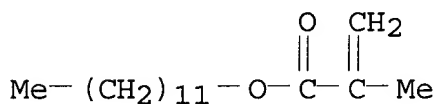
CM 1

CRN 24599-21-1
 CMF C6 H11 O6 P



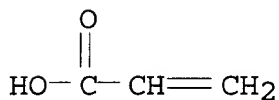
CM 2

CRN 142-90-5
 CMF C16 H30 O2



CM 3

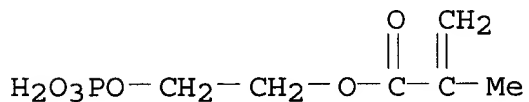
CRN 79-10-7
 CMF C3 H4 O2



RN 137285-71-3 HCA
 CN 2-Propenoic acid, 2-methyl-, dodecyl ester, polymer with
 diethenylbenzene, 2-(phosphonooxy)ethyl 2-methyl-2-propenoate and
 2-propenoic acid, graft (9CI) (CA INDEX NAME)

CM 1

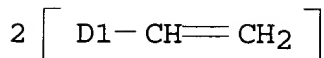
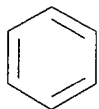
CRN 24599-21-1
 CMF C6 H11 O6 P



CM 2

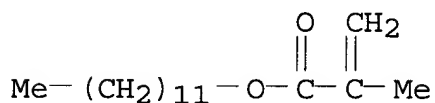
CRN 1321-74-0
 CMF C10 H10

CCI IDS



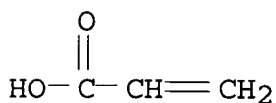
CM 3

CRN 142-90-5
CMF C16 H30 O2



CM 4

CRN 79-10-7
CMF C3 H4 O2



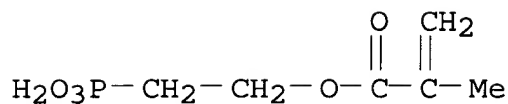
IC ICM G03G005-05
ICS C08L101-00; G03G013-28
ICA C08F030-02
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST electrophotog photoreceptor lithog platemaking; acrylate **binder** electrophotog photoreceptor
IT Lithographic plates
(electrophotog. photoreceptor **sheet** for making)
IT Electrophotographic photoconductors and photoreceptors
(**sheets**, for lithog. platemaking)
IT 9003-20-7 9003-55-8 9003-63-8 9011-14-7 9011-87-4
25085-83-0 25213-39-2 25609-74-9 25685-29-4 26634-88-8
28603-63-6 53058-53-0 58931-97-8 59821-65-7 72058-59-4
81772-37-4 131004-75-6 131004-77-8 131004-81-4 131231-65-7
137717-70-5 137717-71-6
(**binder** resin contg., for electrophotog. photoreceptor

- for lithog. platemaking)
- IT 65697-21-4 126969-79-7 126969-94-6 **131808-91-8**
137560-69-1 **137560-70-4** 137560-71-5 137560-73-7
137560-76-0 137560-77-1 137625-66-2 137991-40-3 137991-41-4
137991-51-6 137991-53-8 137991-54-9 137991-55-0 137991-56-1
(**binder** resin contg., for electrophotog. photoreceptor
sheet for lithog. platemaking)
- IT 33408-30-9D, reaction product with 1,6-hexamethylenediisocyanate
124919-84-2 125120-66-3 134158-48-8 137285-49-5
137285-64-4 **137285-66-6** 137285-68-8 137285-70-2
137285-71-3 137560-68-0 137964-20-6 138570-83-9
(resin particles from, for electrophotog. photoreceptor
sheets used in lithog. platemaking)
- L57 ANSWER 21 OF 37 HCA COPYRIGHT 2002 ACS
- 115:291098 Electrophotographic photoreceptor **sheet** for
lithographic plate preparation. Kato, Eiichi; Ishii, Kazuo (Fuji
Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 03002870 A2
19910109 Heisei, 44 pp. (Japanese). CODEN: JKXXAF. APPLICATION:
JP 1989-136182 19890531.
- AB In the title electrophotog. photoreceptor **sheet** utilizing
.gtoreq.1 photoconductor layers contg. photoconductive ZnO and a
binder resin, the photoconductor layer contains hydrophilic
resin particles of av. diam. equal to or smaller than the max. diam.
of the photoconductive ZnO particles, and the above **binder**
resin is a blend of .gtoreq.1 Resin A and .gtoreq.1 Resin B. Resin
A (wt. av. mol. wt. 1 .times. 10³ - 2 .times. 10⁴) contains the
structural repeating unit [CHa1-Ca2(CO2R1)] [a1, a2 = H, halo,
cyano, hydrocarbyl; R1 = hydrocarbyl] .gtoreq.30% and 1 end of the
polymer chain is terminated by a polar group selected from PO3H2,
SO3H, CO2H, OH, PO(OH)R0 (R0 = hydrocarbyl, hydrocarbyloxy), and
cyclic acid anhydride-contg. group. Resin B (wt. av. mol. wt.
.gtoreq.5 .times. 10⁴) has the structural repeating unit
-[CHb1-Cb2(VR2)] [V = CO2, OCO, (CH2)lOCO, (CH2)lCO2, O, SO2; l =
1-4; R2 = C1-22 hydrocarbyl; b1,b2 = H, halo, cyano, C1-8
hydrocarbyl; CO2R3, (R3 = C1-18 hydrocarbyl) interposed by C1-8
hydrocarbon group].
- IT **137563-54-3**
(latex contg., for electrophotog. photoreceptor)
- RN 137563-54-3 HCA
- CN 2-Propenoic acid, 2-methyl-, dodecyl ester, polymer with
diethenylbenzene, 2-phosphonoethyl 2-methyl-2-propenoate and
2-propenoic acid, graft (9CI) (CA INDEX NAME)

CM 1

CRN 80730-17-2

CMF C6 H11 O5 P

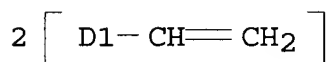
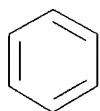


CM 2

CRN 1321-74-0

CMF C10 H10

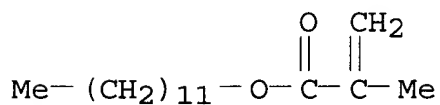
CCI IDS



CM 3

CRN 142-90-5

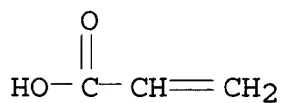
CMF C16 H30 O2



CM 4

CRN 79-10-7

CMF C3 H4 O2



IT 124919-84-2

(resin particles of, electrophotog. photoreceptor using)

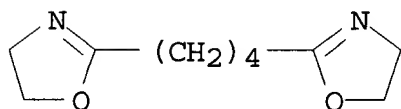
RN 124919-84-2 HCA

CN Oxazole, 2,2'-(1,4-butanediyl)bis[4,5-dihydro-, polymer with
4,5-dihydro-2-methyloxazole (9CI) (CA INDEX NAME)

CM 1

CRN 36931-59-6

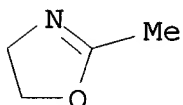
CMF C10 H16 N2 O2



CM 2

CRN 1120-64-5

CMF C4 H7 N O



IT 137560-67-9

(resin particles, for electrophotog. photoreceptor prepn.)

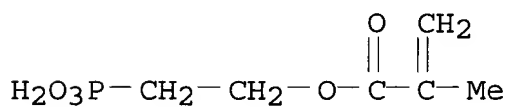
RN 137560-67-9 HCA

CN 2-Propenoic acid, 2-methyl-, dodecyl ester, polymer with
2-phosphonoethyl 2-methyl-2-propenoate and 2-propenoic acid, graft
(9CI) (CA INDEX NAME)

CM 1

CRN 80730-17-2

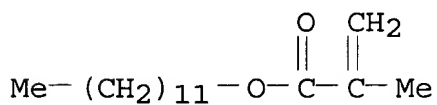
CMF C6 H11 O5 P



CM 2

CRN 142-90-5

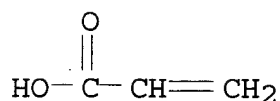
CMF C16 H30 O2



CM 3

CRN 79-10-7

CMF C3 H4 O2

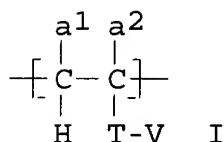


- IC ICM G03G005-05
ICS C08L033-04; C08L041-00; C08L101-00; G03G005-05; G03G013-28
ICA C08F008-00; C08F008-36; C08F008-40; C08F008-46
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST electrophotog photoreceptor blank lithog plate; **binder**
resin electrophotog photoreceptor lithog
IT Lithographic plates
(electrophotog. receptor **sheet** for making)
IT 9003-42-3 9003-63-8, Butylmethacrylate homopolymer 9011-14-7D,
Methylmethacrylate homopolymer, carboxy-terminated 9011-87-4
25085-83-0, Benzylmethacrylate homopolymer 25189-01-9 25609-74-9,
Propylmethacrylate homopolymer 26634-88-8 28702-85-4,
2-Naphthylmethacrylate homopolymer 30604-93-4 31547-85-0
35641-48-6 36876-19-4 37337-26-1 51960-60-2 52125-73-2
71154-40-0 72642-33-2 74937-81-8, 2-Methylphenylmethacrylate
homopolymer 97428-98-3 111594-04-8 114633-33-9 115859-46-6
126969-53-7 126969-58-2 126970-08-9 126978-02-7 126981-99-5
127909-19-7 127909-29-9 127939-38-2 127968-98-3 127968-99-4
128905-69-1 129401-30-5 135254-14-7 135254-15-8 135254-17-0
137535-17-2 137560-94-2 137560-95-3 137563-55-4
(**binder** resin contg., for electrophotog. photoreceptor)
IT 27756-39-4, 2-Hydroxyethylacrylate-methylmethacrylate copolymer
28062-60-4, Acrylic acid-dodecylmethacrylate copolymer 31212-98-3
127006-47-7 134158-43-3 137285-49-5 137285-70-2 137560-68-0
137563-54-3
(latex contg., for electrophotog. photoreceptor)
IT 33408-30-9D, reaction product with hexamethylenediisocyanate
124919-84-2 134158-49-9
(resin particles of, electrophotog. photoreceptor using)
IT 137285-64-4 137285-68-8 **137560-67-9**
(resin particles, for electrophotog. photoreceptor prepn.)

L57 ANSWER 22 OF 37 HCA COPYRIGHT 2002 ACS

115:266906 Electrophotographic photoacceptor **sheets** for
lithographic platemaking. Kato, Eiichi; Ishii, Kazuo (Fuji Photo
Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 02250065 A2
19901005 Heisei, 43 pp. (Japanese). CODEN: JKXXAF. APPLICATION:
JP 1989-28708 19890209.

GI



AB In the title electrophotog. **sheet**, the photoconductor layer contains photoconductive ZnO particles, hydrophilic resin particles of diam. equal to or smaller than that of the above ZnO particles, and a **binder** resin contg. .gtoreq.1 types of Resin (A) and .gtoreq.1 types of Resin (B). Resin (A) (wt. av. mol. wt. 103-2 .times. 104) contains a copolymer component (0.5-20%) contg. .gtoreq.1 polar groups selected from PO₃H₂, SO₃H, CO₂H, OH, SH, and PO(OH)(OR) (R = hydrocarbyl). Resin (B) has a wt. av. mol. wt. .gtoreq.5 .times. 104, in crosslinked, and has the structure repeating unit I [T = CO₂, OCO, CH₂OCO, CH₂CO₂, O, SO₂; V = C1-22 hydrocarbyl; a₁, a₂ = H, halo, CN, C1-8 hydrocarbyl, CO₂Z or CO₂Z (Z = C1-18 hydrocarbyl) with interposed C1-8 hydrocarbyl]. Superior blanks are obtained for lithog. plates. The hydrophilic resin particles are to desensitize the non-image-bearing areas.

IT 137285-65-5 137285-66-6
(latex from)

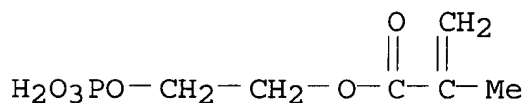
RN 137285-65-5 HCA

CN 2-Propenoic acid, 2-methyl-, dodecyl ester, polymer with 2-propenoic acid, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester, polymer with 2-(phosphonooxy)ethyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

CM 1

CRN 24599-21-1

CMF C6 H11 O6 P



CM 2

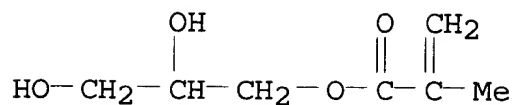
CRN 125052-36-0

CMF (C16 H30 O2 . C3 H4 O2)x . x C7 H12 O4

CM 3

CRN 5919-74-4

CMF C7 H12 O4



CM 4

CRN 28062-60-4

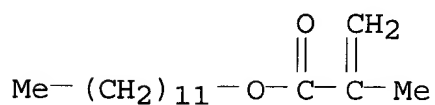
CMF (C16 H30 O2 . C3 H4 O2)x

CCI PMS

CM 5

CRN 142-90-5

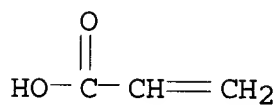
CMF C16 H30 O2



CM 6

CRN 79-10-7

CMF C3 H4 O2



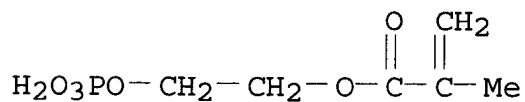
RN 137285-66-6 HCA

CN 2-Propenoic acid, 2-methyl-, dodecyl ester, polymer with
2-(phosphonooxy)ethyl 2-methyl-2-propenoate and 2-propenoic acid,
graft (9CI) (CA INDEX NAME)

CM 1

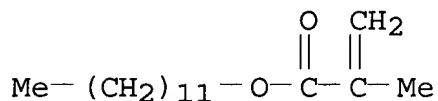
CRN 24599-21-1

CMF C6 H11 O6 P



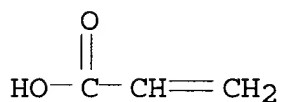
CM 2

CRN 142-90-5
CMF C16 H30 O2



CM 3

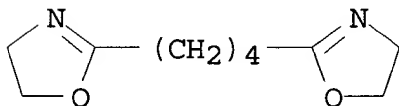
CRN 79-10-7
CMF C3 H4 O2



IT **124919-84-2**
(latex particles from, electrophotog. photoreceptor using)
RN 124919-84-2 HCA
CN Oxazole, 2,2'-(1,4-butanediyl)bis[4,5-dihydro-, polymer with
4,5-dihydro-2-methyloxazole (9CI) (CA INDEX NAME)

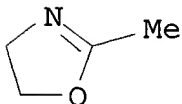
CM 1

CRN 36931-59-6
CMF C10 H16 N2 O2



CM 2

CRN 1120-64-5
CMF C4 H7 N O

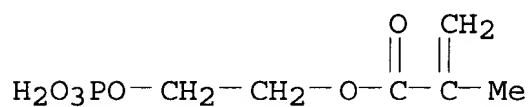


IT **137285-71-3 137455-59-5**
(latex particles from, for electrophotog. photoreceptor)
RN 137285-71-3 HCA
CN 2-Propenoic acid, 2-methyl-, dodecyl ester, polymer with

diethenylbenzene, 2-(phosphonooxy)ethyl 2-methyl-2-propenoate and
2-propenoic acid, graft (9CI) (CA INDEX NAME)

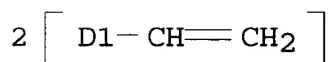
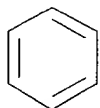
CM 1

CRN 24599-21-1
CMF C6 H11 O6 P



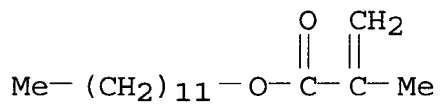
CM 2

CRN 1321-74-0
CMF C10 H10
CCI IDS



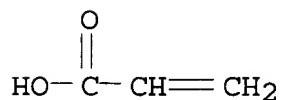
CM 3

CRN 142-90-5
CMF C16 H30 O2



CM 4

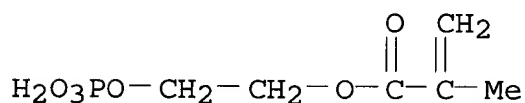
CRN 79-10-7
CMF C3 H4 O2



RN 137455-59-5 HCA
 CN 2-Propenoic acid, 2-methyl-, dodecyl ester, polymer with 2-propenoic acid, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester, polymer with diethenylbenzene and 2-(phosphonooxy)ethyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

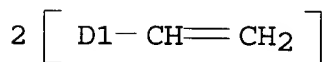
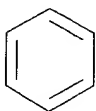
CM 1

CRN 24599-21-1
 CMF C6 H11 O6 P



CM 2

CRN 1321-74-0
 CMF C10 H10
 CCI IDS

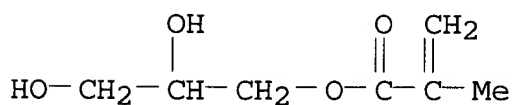


CM 3

CRN 125052-36-0
 CMF (C16 H30 O2 . C3 H4 O2)x . x C7 H12 O4

CM 4

CRN 5919-74-4
 CMF C7 H12 O4

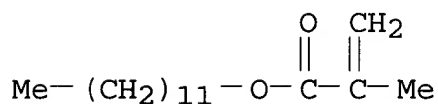


CM 5

CRN 28062-60-4
 CMF (C16 H30 O2 . C3 H4 O2)x
 CCI PMS

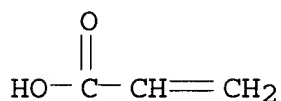
CM 6

CRN 142-90-5
 CMF C16 H30 O2



CM 7

CRN 79-10-7
 CMF C3 H4 O2



IT 137285-57-5P

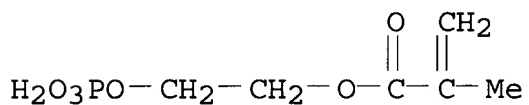
(prepn. and use of, as **binder** resin for electrophotog.
 photoreceptor)

RN 137285-57-5 HCA

CN 2-Propenoic acid, 2-methyl-, 1-naphthalenyl ester, polymer with
 2-(phosphonooxy)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

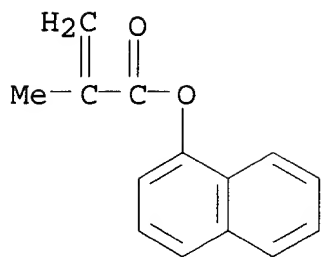
CM 1

CRN 24599-21-1
 CMF C6 H11 O6 P



CM 2

CRN 19102-44-4
 CMF C14 H12 O2



- IC ICM G03G013-28
ICS B41N001-14; G03G005-05; G03G005-08
- CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST electrophotog **sheet** lithog plate; **binder** resin lithog plate
- IT Lithographic plates
(electrophotog. **sheet** for making, **binder** resin for)
- IT Electrophotographic plates
(photoreceptor **sheet**, for lithog. plates, **binder** for)
- IT 137285-64-4 **137285-65-5 137285-66-6**
137285-67-7 137285-68-8
(latex from)
- IT **124919-84-2** 125120-27-6 134158-49-9 137285-73-5
137285-74-6
(latex particles from, electrophotog. photoreceptor using)
- IT 25154-86-3 27756-39-4, 2-Hydroxyethylacrylate-methylmethacrylate copolymer 28062-60-4, Acrylic acid-dodecyl methacrylate copolymer 31212-98-3, Methacrylic acid-vinyl alcohol copolymer 128669-22-7
134158-43-3 137285-69-9 137285-70-2 **137285-71-3**
137285-72-4 **137455-59-5**
(latex particles from, for electrophotog. photoreceptor)
- IT 28572-98-7P 30604-93-4P 65697-22-5P 126860-39-7P
126969-53-7P 126969-71-9P 126970-08-9P 126978-07-2P
127968-98-3P 134147-49-2P 135740-38-4P 137285-49-5P
137285-50-8P 137285-51-9P 137285-52-0P 137285-53-1P
137285-54-2P 137285-55-3P 137285-56-4P **137285-57-5P**
137285-58-6P 137285-59-7P 137307-79-0P 137370-71-9P
(prepn. and use of, as **binder** resin for electrophotog. photoreceptor)
- L57 ANSWER 23 OF 37 HCA COPYRIGHT 2002 ACS
- 114:88618 Adsorption of bilirubin by **amine**-containing polyacrylamide **resins**. Wu, Gaoming; Brown, G. R. (Dep. Chem., McGill Univ., Montreal, QC, H3A 2K6, Can.). Reactive Polymers, 14(1), 49-61 (English) 1991. CODEN: REPLEN. ISSN: 0923-1137.
- AB Polymeric sorbents for bilirubin were synthesized by the reaction of lightly **crosslinked** poly(Me acrylate) beads with di-, tri-

or tetramines. The sorbents (or resins) have the general structure $P[(CH_2)_nN^+R_2Cl^-]_mR$, where P represents a polyacrylamide backbone, R represents H or Me, and n and m are integers between 2-6 and between 1-3, resp. The resins have high water swellability and amine functionalities of 2 to 8 meq/g. Isotherms (4.degree.) for the adsorption of bilirubin in 0.050 M aq. phosphate buffer, pH = 7.8, show an increased capacity as the no. of amino groups per pendant group is increased. The capacity is also increased by the quaternization of the amino groups in the resins. Thus, electrostatic interaction between the pos. charged amino group of the **polymer** and the **carboxyl anion** of bilirubin is the main driving force for the adsorption. As indicated by the effect of changes in the length of the methylene spacer, i.e., in the value of n, hydrophobic interactions are also of importance in the binding. Isotherms with an S-shape, obtained for some of the protonated adsorbents, suggest pos. cooperativity in binding, similar to that obtained for resins with lysine-contg. functional groups.

CC 63-8 (Pharmaceuticals)

IT **Quaternary ammonium** compounds, **polymers**

(amine-contg. polyacrylamides, for adsorption of bilirubin)

IT Amines, compounds

(reaction products, with poly(Me acrylate), quaternized, **crosslinked**, prepn. of, for adsorption of bilirubin)

IT 107-15-3DP, 1,2-Ethanediamine, reaction products with poly(Me acrylate), quaternized 109-76-2DP, 1,3-Propanediamine, reaction products with poly(Me acrylate), quaternized 110-60-1DP, 1,4-Butanediamine, reaction products with poly(Me acrylate), quaternized 111-40-0DP, Diethylenetriamine, reaction products with poly(Me acrylate), quaternized 112-24-3DP, Triethylenetetramine, reaction products with poly(Me acrylate), quaternized 124-09-4DP, 1,6-Hexanediamine, reaction products with poly(Me acrylate), quaternized 4097-89-6DP, N,N-Bis(2-aminoethyl)ethylenediamine, reaction products with poly(Me acrylate), quaternized 132042-92-3DP, reaction products with polyamines, quaternized (**crosslinked**, prepn. of, for adsorption of bilirubin)

L57 ANSWER 24 OF 37 HCA COPYRIGHT 2002 ACS

113:154479 Manufacture of pressure-sensitive printing **sheets**.

Irii, Shinsuke; Kumamoto, Hiroshi; Shiozaki, Tomoharu (Kanzaki Paper Mfg. Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 02136281 A2 19900524 Heisei, 4 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1988-291911 19881117.

AB The title **sheets** are prepd. by coating mixts of adhesives and microencapsulated, colorless electron-donor dyes on substrates and drying by near IR. Thus, coating a mixt. of oxidized starch, starch, and microencapsulated dispersion of acrylic acid-Et acrylate-styrene-vinylsulfonic acid copolymer, crystal violet lactone, and melamine resin on paper and drying with near IR gave a smooth **sheet**.

IT 9003-08-1 127189-95-1, Acrylic acid-ethyl acrylate-styrene-vinylsulfonic acid copolymer

(dye-contg. microcapsules, for pressure-sensitive printing
sheets)

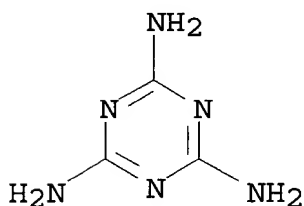
RN 9003-08-1 HCA

CN 1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde (9CI) (CA
INDEX NAME)

CM 1

CRN 108-78-1

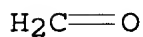
CMF C3 H6 N6



CM 2

CRN 50-00-0

CMF C H2 O



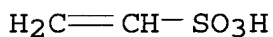
RN 127189-95-1 HCA

CN 2-Propenoic acid, polymer with ethenesulfonic acid, ethenylbenzene
and ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 1184-84-5

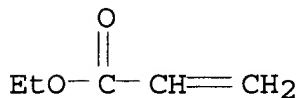
CMF C2 H4 O3 S



CM 2

CRN 140-88-5

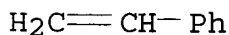
CMF C5 H8 O2



CM 3

CRN 100-42-5

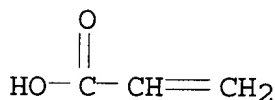
CMF C8 H8



CM 4

CRN 79-10-7

CMF C3 H4 O2



IC ICM B41M005-124

CC 42-11 (Coatings, Inks, and Related Products)

Section cross-reference(s): 74

ST pressure sensitive printing **sheet**; IR near drying coating;
 microcapsule dye leuco printing **sheet**; acrylic polymer
 microcapsule printing **sheet**

IT Dyes

(leuco, microencapsulated, in pressure-sensitive printing
sheets)

IT Printing, nonimpact

(**sheets**, bearing microencapsulated leuco dyes)

IT 9005-25-8D, Starch, oxidized

(**binders**, for pressure-sensitive printing
sheets)

IT 9003-08-1 127189-95-1, Acrylic acid-ethyl

acrylate-styrene-vinylsulfonic acid copolymer

(dye-contg. microcapsules, for pressure-sensitive printing
sheets)

L57 ANSWER 25 OF 37 HCA COPYRIGHT 2002 ACS

112:160086 Epoxy resin **adhesives** for bonding metal foils to
 substrates for electric circuit boards. Nemoto, Akimi; Ito,
 Akiyoshi; Nakano, Yoshitomo; Kada, Masumi (Mitsubishi Petrochemical
 Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 01254787 A2 19891011
 Heisei, 5 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP
 1988-82639 19880404.

AB The **adhesives** comprise 100 parts of a mixt. of epoxy
 resins having .gtoreq.2 epoxy groups/mol. and linear high-mol.-wt.
 cresol novolak resins with no.-av. mol. wt. .gtoreq.1500 at equiv.
 ratio of epoxy groups to phenolic OH groups 1:0.5-1.5 and 8-60 parts
 CO2H-contg. acrylonitrile-butadiene copolymers which are solid at
 room temp. Thus, 108 g o-cresol was treated with 32 g

paraformaldehyde in Et Cellosolve in the presence of aq. H₂SO₄ to give a novolak resin (I) with no.-av. mol. wt. 2600 and OH equiv. wt. 120, 40 parts of which was mixed with Epikote 828 60, Nipol 1072 20, 2E4MZ (2-ethyl-4-methylimidazole) 0.3, MEK 80, and MePh 40 parts to give an **adhesive**. The **adhesive** was spread on 130-.mu.m glass cloth-epoxy **sheets** at 30-.mu.m dry thickness, dried at 140.degree. for 5 min, laminated with 35-.mu.m Cu foils at 160.degree., 1 m/min, and 1 kg/cm², then cured at 170.degree. for 1 h to give Cu-clad test specimens, which showed 90.degree. peel strength at 25 and 150.degree. 2.0 and 1.3 kg/cm, resp., and solder resistance at 300.degree. 60 s, vs. 1.7, 0.6, and 10, resp., for a similar compn. contg. o-cresol novolak resin with no.-av. mol. wt. 600 instead of I.

IT 126367-05-3D, reaction products with acrylonitrile-butadiene-methacrylic acid copolymer rubber

(**adhesives**, for bonding metal foils to substrates, with good fluidity and solder resistance)

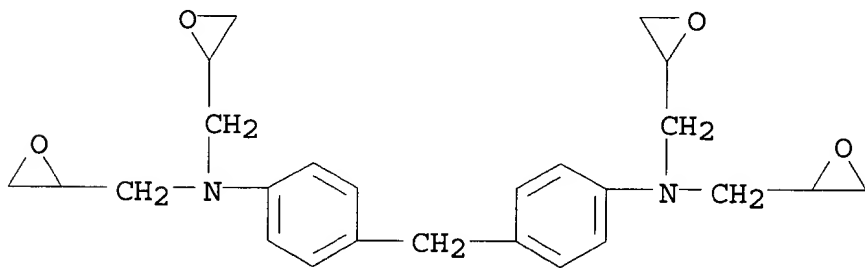
RN 126367-05-3 HCA

CN Formaldehyde, polymer with (chloromethyl)oxirane, N,N'-(methylenedi-4,1-phenylene)bis[N-(oxiranylmethyl)oxiranemethanamine], 4,4'-(1-methylethylidene)bis[phenol] and 2-methylphenol (9CI)
(CA INDEX NAME)

CM 1

CRN 28768-32-3

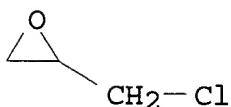
CMF C25 H30 N2 O4



CM 2

CRN 106-89-8

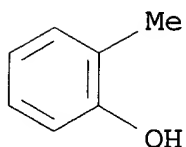
CMF C3 H5 Cl O



CM 3

CRN 95-48-7

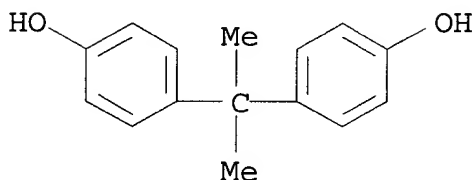
CMF C7 H8 O



CM 4

CRN 80-05-7

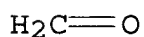
CMF C15 H16 O2



CM 5

CRN 50-00-0

CMF C H2 O



IC ICM C09J003-16

ICA C08G059-40

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 55, 56, 76

ST epoxy resin **adhesive** copper foil; solder resistance epoxy resin **adhesive**IT Polyimides, uses and miscellaneous
(films, bonding metal foils to, **adhesives** for)IT Metals, uses and miscellaneous
(foils, **adhesives** for, epoxy phenolic **resins** contg. **carboxy**-contg. acrylonitrile-butadiene copolymers, with good fluidity and solder resistance)IT Epoxy resins, uses and miscellaneous
(glass **fiber**-reinforced, **sheets**, bonding metal foils to, **adhesives** for)IT Heat-resistant materials
(**adhesives**, epoxy phenolic **resins**, with

- carboxy**-contg. nitrile rubber, for bonding metal foils to substrates, with good fluidity)
- IT Phenolic resins, uses and miscellaneous
(epoxy, **adhesives**, with **carboxy**-contg. nitrile rubber, for bonding metal foils to substrates, with good fluidity and solder resistance)
- IT **Adhesives**
(heat-resistant, epoxy phenolic **resins**, with **carboxy**-contg. nitrile rubber, for bonding metal foils to substrates, with good fluidity)
- IT Epoxy resins, uses and miscellaneous
(phenolic, **adhesives**, with **carboxy**-contg. nitrile rubber, for bonding metal foils to substrates, with good fluidity and solder resistance)
- IT Electric circuits
(printed, **adhesives** for lamination of metal foils in manuf. of)
- IT Glass fibers, uses and miscellaneous
(textiles, epoxy resin-impregnated, bonding metal foils to, **adhesives** for)
- IT 67626-89-5D, reaction products with acrylonitrile-butadiene-methacrylic acid copolymer rubber 106056-01-3D, reaction products with acrylonitrile-butadiene-methacrylic acid copolymer rubber **126367-05-3D**, reaction products with acrylonitrile-butadiene-methacrylic acid copolymer rubber 126419-39-4D, reaction products with acrylonitrile-butadiene-methacrylic acid copolymer rubber (**adhesives**, for bonding metal foils to substrates, with good fluidity and solder resistance)
- IT 7440-50-8, Copper, uses and miscellaneous
(foils, **adhesives** for, epoxy phenolic **resins** contg. **carboxy**-contg. acrylonitrile-butadiene copolymers, with good fluidity and solder resistance)
- IT 9010-81-5, Acrylonitrile-butadiene-methacrylic acid copolymer (rubber, reaction products with epoxy-phenolic resins, **adhesives**, for bonding metal foils to substrates, with good fluidity and solder resistance)

L57 ANSWER 26 OF 37 HCA COPYRIGHT 2002 ACS

108:187679 Preparation of magnetic ion exchangers by the reaction of **polyamines** with chlorinated **polymers**. Clemence, L. J.; Eldridge, R. J. (Div. Chem. Wood Technol., CSIRO, Clayton, 3168, Australia). Reactive Polymers, Ion Exchangers, Sorbents, 8(1), 27-40 (English) 1988. CODEN: RPISDH. ISSN: 0167-6989.

AB Magnetic weak-base ion exchangers with capacities of .ltoreq.6.2 meq/g were made by the reaction of liq. (branched) poly(ethylenimine) (I, no.-av. mol. wt. 600-1800) with particles of vinyl acetate-vinyl chloride copolymer (II) or diamino-hexane-**crosslinked** polyepichlorohydrin (III) contg. a magnetic filler. Polyamines of higher mol. wt. (in soln.) reacted at the surface of the magnetic particles to form low-capacity ion exchangers having a core-shell structure. Linear III could be coupled to magnetic **crosslinked** III particles by reaction

with the amino groups of the **crosslinks**. I coupled to magnetic particles could be carboxymethylated with Na chloroacetate but could not be quaternized. Alternatively, magnetic resins could be made by the mutual **crosslinking** of I and II or III in quasi-soln., and subsequently derivatized either by carboxymethylation or partial quaternization of amino groups or by displacement of residual reactive chlorines by thiols. Magnetic **polyamine resins** or their derivs. adsorbed Cu^{2+} , Ni^{2+} , Fe^{3+} , Zn^{2+} , Cd^{2+} , and Hg^{2+} ions from aq. soln.

IT 9002-98-6DP, reaction products with chlorinated polymers filled with metal oxides

(magnetic ion exchangers, prepn. and properties of)

RN 9002-98-6 HCA

CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 151-56-4

CMF C2 H5 N



IT 27636-21-1, 1,6-Diaminohexane-epichlorohydrin copolymer (metal oxide-filled, for prepn. of magnetic ion exchangers)

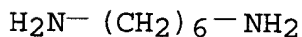
RN 27636-21-1 HCA

CN 1,6-Hexanediamine, polymer with (chloromethyl)oxirane (9CI) (CA INDEX NAME)

CM 1

CRN 124-09-4

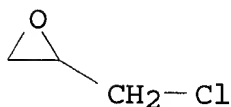
CMF C6 H16 N2



CM 2

CRN 106-89-8

CMF C3 H5 Cl O



CC 37-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 38

IT **Cation** exchangers

(magnetic, prepn. of, by reaction of polyamines with metal oxide-filled chlorinated polymers)

IT 149-30-4DP, MBT, reaction products with **carboxymethyl** group-contg. **polymers** filled with metal oxides

9002-98-6DP, reaction products with chlorinated polymers filled with metal oxides 25232-41-1DP, Poly(4-vinylpyridine), reaction products with vinyl acetate-vinyl chloride copolymer filled with metal oxides 62238-80-6DP, Poly(diallylamine), reaction products with vinyl acetate-vinyl chloride copolymer filled with metal oxides 64080-86-0DP, reaction products with vinyl acetate-vinyl chloride copolymer filled with metal oxides 77716-45-1DP, reaction products with vinyl acetate-vinyl chloride copolymer filled with metal oxides 114386-15-1DP, reaction products with vinyl acetate-vinyl chloride copolymer filled with metal oxides

(magnetic ion exchangers, prepn. and properties of)

IT 9003-22-9 **27636-21-1**, 1,6-Diaminohexane-epichlorohydrin copolymer

(metal oxide-filled, for prepn. of magnetic ion exchangers)

IT 7439-89-6P, properties 7439-97-6P, properties 7440-02-0P, properties 7440-43-9P, Cadmium, properties 7440-50-8P, properties 7440-66-6P, properties

(uptake of, by magnetic ion exchangers prepd. from **polyamines** and chlorinated **polymers**)

L57 ANSWER 27 OF 37 HCA COPYRIGHT 2002 ACS

108:97069 Hydrophilic **cation**-exchange resins used in column packings. Ishiguro, Susumu; Moriguchi, Soyao (Showa Denko K. K., Japan). Jpn. Kokai Tokkyo Koho JP 62269754 A2 19871124 Showa, 6 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1986-110625 19860516.

AB The title resins are manufd. by (a) reacting a glycidyl group-contg. monomer such as glycidyl acrylate or glycidyl methacrylate (I) with a polyvinyl compd. such as ethylene glycol dimethacrylate (II), or divinylbenzene to form a **crosslinked** copolymer; (b) hydrolyzing the **crosslinked** copolymer with a hydroxy-contg. compd. to modify the glycidyl groups and to open epoxy rings; and (c) carboxylating the reaction product with a halogenated acetic acid salt to obtain a weak acidic ion-exchange resin. The ion-exchange resin has a higher mech. strength and a higher chem. resistance, and is particularly suitable for liq. chromatog. column packings. Thus, a 5:2 (wt. ratio) I-II **crosslinked** copolymer (particle diam. 10-15 .mu.) was reacted with 0.5 N H2SO4 to open epoxy rings, hydrophilisized with epichlorohydrine, and then carboxylated with sodium monochloroacetate to obtain an ion-exchange resin with ion-exchange vol. 0.40 meq/g.

IC ICM B01J039-18

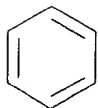
ICS C08F008-00; C08F008-14; G01N030-48

CC 48-1 (Unit Operations and Processes)

Section cross-reference(s): 80

- ST **cationic** exchange **resin** column packing; glycidyl methacrylate copolymer HPLC column
- IT Chromatography, column and liquid
(**cation**-exchange, column-packing resins for, manuf. of)
- IT 106-89-8D, reaction products with hydrolyzed glycidyl methacrylate-ethylene glycol methacrylate **copolymer, carboxylated** 2224-15-9D, Ethylene glycol diglycidyl ether, reaction products with hydrolyzed glycidyl methacrylate-ethylene glycol methacrylate **copolymer, carboxylated** 3926-62-3D, Sodium monochloroacetate, reaction products with hydrolyzed glycidyl methacrylate-ethylene glycol methacrylate copolymer and epichlorohydrine 31743-77-8D, hydrolyzed, reaction product with epichlorohydrin and sodium monochloroacetate
(**cation**-exchange **resin**, for column packings of liq. chromatog.)
- L57 ANSWER 28 OF 37 HCA COPYRIGHT 2002 ACS
- 102:157966 Conductive **sheet** for electrophotography. (Kohjin Co., Ltd., Japan; Ishihara Sangyo Kaisha Ltd.). Jpn. Kokai Tokkyo Koho JP 59121343 A2 19840713 Showa, 8 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1982-233072 19821228.
- AB An electrophotog. paper contg. TiO₂ as the photoconductive material uses a paper support coated with a compn. contg. a conductive agent, a soap-free emulsion, and a hydrophilic polymer **binder**. The claimed paper is suited for electrofax process, having uniform conductive properties unaffected by moisture. Thus, a polystyrene emulsion was prepd. by polymn. in an aq. medium contg. K persulfate. Both sides of a paper support were coated with a compn. contg. Na poly(styrenesulfonic acid) 18, the above polystyrene emulsion 11, starch phosphate ester 12, kaolin 27, talc 26, and starch dialdehyde 6% and dried. A photoconductive layer was formed by coating a mixt. of an acrylic resin (Aroset 5804, Nisshoku Arrow Chem.) and TiO₂ sensitized with methine dyes (NK-1410 and NK-1330 from Japanese Res. Inst. Photosensitizing Dyes Co. Ltd), dibromofluorescein, and Zn naphthenate. The obtained paper was used in electrophotog. and color electrophotog. to give excellent results.
- IT **9080-79-9**
(conductive layer contg. soap-free emulsion, hydrophilic **binder** and, for electrophotog. paper supports)
- RN **9080-79-9** HCA
- CN Benzenesulfonic acid, ethenyl-, homopolymer, sodium salt (9CI) (CA INDEX NAME)
- CM 1
- CRN 50851-57-5
- CMF (C8 H8 O3 S)x
- CCI PMS
- CM 2
- CRN 26914-43-2

CMF C8 H8 O3 S
CCI IDS



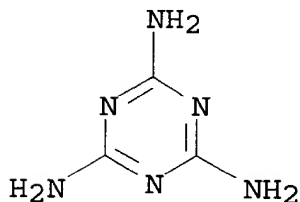
D1-CH=CH₂

D1-SO₃H

IT 9003-08-1
(conductive layer contg., for electrophotog. paper supports)
RN 9003-08-1 HCA
CN 1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde (9CI) (CA
INDEX NAME)

CM 1

CRN 108-78-1
CMF C3 H6 N6



CM 2

CRN 50-00-0
CMF C H2 O

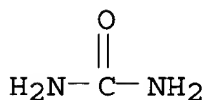
H₂C=O

IC G03G005-14
ICA G03G005-08
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
ST electrophotog paper support electroconductive coating; electrofax
sheet soapless polymer emulsion

- IT Photography, electro-, paper
(supports, coatings contg. conductive agent, soap-free emulsion
and hydrophilic **binder** for)
- IT 9017-80-5 **9080-79-9**
(conductive layer contg. soap-free emulsion, hydrophilic
binder and, for electrophotog. paper supports)
- IT 107-22-2 471-34-1, uses and miscellaneous 1343-88-0 7786-30-3,
uses and miscellaneous **9003-08-1** 9003-53-6 9004-62-0
9011-13-6 9047-50-1 11070-82-9 11120-02-8 14807-96-6, uses
and miscellaneous 25053-12-7 95781-66-1
(conductive layer contg., for electrophotog. paper supports)
- L57 ANSWER 29 OF 37 HCA COPYRIGHT 2002 ACS
79:6405 Artificial leathers. Blazek, Ladislav; Muck, Eduard; Strachota,
Jaroslav; Ambroz, Ludek; Bogdanovicz, Ladislav; Skopal, Jaroslav
Czech. CS 147089 19730115, 3 pp. (Czech). CODEN: CZXXA9.
APPLICATION: CS 1969-4963 19690714.
- AB Leather substitutes were prepd. from combinations of textile
support, polymer **binder**, and filler. E.g., a
collagen-polypropylene fiber fleece reinforced with a textile mat
which was **glued** with a latex-casein-chloroprene
dispersion. The **sheet** was dried at 90.deg., immersed in a
binder bath according to Czechoslovakian patent 140,012, and
coated on the reinforced side with a layer 0.6 mm thick prepd. by
homogenizing the following constituents: chrome leather fluff, aq.
dispersions of low-mol.-wt. polypropylene [9003-07-0] and
carboxylated butadiene-acrylonitrile **copolymer**,
acrylonitrile polymer latex, urea-formaldehyde condensate [
9011-05-6], casein modified with Et acrylate [140-88-5], aq.
dispersion of a styrene-maleic anhydride copolymer [27101-47-9], and
casein pigment. The product was processed to obtain a texture
resembling natural leather.
- IT **9011-05-6**
(in coatings for textile-reinforced polypropylene-collagen fiber
fleeces for leather substitutes)
- RN 9011-05-6 HCA
CN Urea, polymer with formaldehyde (9CI) (CA INDEX NAME)

CM 1

CRN 57-13-6
CMF C H4 N2 O



CM 2

CRN 50-00-0

CMF C H2 O

 $H_2C=O$

- IC D04H; D06N
 CC 37-3 (Plastics Fabrication and Uses)
 ST leather substitutes; polypropylene fabric **binder**
 IT **Adhesives**
 (casein-neoprene rubber, for textile-reinforced
 collage-polypropylene fiber fleeces for leather substitutes)
 IT Leather
 (fluff, textile-reinforced acrylic polymer-bonded
 collagen-polypropylene **fiber** fleeces **coated**
 with, for leather substitutes)
 IT 140-88-5 9003-07-0 **9011-05-6** 9011-13-6
 (in coatings for textile-reinforced polypropylene-collagen fiber
 fleeces for leather substitutes)
- L57 ANSWER 30 OF 37 HCA COPYRIGHT 2002 ACS
 72:122863 Fibrous binding agent for non-woven materials. Jongetjes,
 Hendrik (Koninklijke Papierfabrieken Van Gelder Zonen N. V.). Brit.
 GB 1185268 19700325, 5 pp. (English). CODEN: BRXXAA. APPLICATION:
 GB 19681021.
- AB A latex contg. a **carboxy polymer** is mixed with
 an aq. soln. of a **cationic polymer** at pH 6-9 for
 <1 hr and the pH adjusted to 2-4 to give a dispersion of finely
 divided fibrous particles which is used as a binding agent for
 nonwoven textiles. Thus, H2O 440, a 50% solids 50:47:3
 butadiene-styrene-acrylic acid copolymer latex at pH 8.8 50, and a
 10% aq. cationic urea-HCHO precondensate soln. at pH 10.5 (Urecoll
 K) 10, were stirred together to give 500 ml of a 5% suspension of
 fine preflocculate. The suspension (10 ml) was mixed with 1000 ml
 H2O adjusted to pH 3 with AcOH, and fibrous particles sepd. The
 particles (0.5 g) provided a binding agent which was mixed with a
 suspension of 1 g 6 mm long, 1.5 denier polyamide fibers in water
 and a nonwoven fabric was manufd. on a lab. **sheet** former.
 The fabric, which showed 95-100% binding agent retention, weighed 50
 g/m2 and had a tensile strength of 4.8 kg/5 cm and 33% elongation at
 break. The fabric showed 82% of the dry strength when wet. A
 similar **binder** was prepd. using an acrylic ester-itaconic
 acid copolymer latex and a cationic polyamide **crosslinked**
 with epichlorohydrin (Kymene-557).
- IC C08D
 CC 39 (Textiles)
 ST fibrous **binders** nonwoven fabrics; **binders**
 fibrous nonwoven fabrics; nonwoven fabrics fibrous **binders**
 IT Rubber, synthetic
 (acrylic acid-butadiene-styrene, fibrous **binders** of,
 contg. cation polyamides, for nonwoven textiles)
 IT Polyamides, uses and miscellaneous
 (acrylic ester-itaconic acid polymer latex fibrous

- binders** contg. Kymene 557 epichlorohydrin-
crosslinked, for nonwoven textiles)
- IT Nylon, uses and miscellaneous
(butadiene-styrene polymer latex contg. urea condensates fibrous
binders contg., for nonwoven textiles)
- IT Textiles
(nonwoven, fibrous binding materials for, from **polymer**
latexes contg. **carboxyl** groups)
- IT Binding materials
(**polymer** latexes contg. **carboxyl** groups,
fibrous, for nonwoven textiles)
- IT Urea condensation products, uses and miscellaneous
(butadiene-styrene polymer latexes contg. Urecoll K, fibrous
binders of, for nonwoven textiles)
- IT 25085-39-6, uses and miscellaneous
(fibrous **binders** from, contg. cationic urea
condensates, for nonwoven textiles)
- IT 106-89-8, uses and miscellaneous
(polyamides **crosslinked** by, acrylic ester-itaconic acid
polymer latex fibrous **binders** contg., for nonwoven
textiles)

L57 ANSWER 31 OF 37 HCA COPYRIGHT 2002 ACS

71:50975 Vinyl copolymer ion-exchange resins. (VEB Farbenfabrik Wolfen).
Fr. FR 1537741 19680830, 6 pp. (French). CODEN: FRXXAK.
APPLICATION: FR 19670609.

- AB A hydrophobic copolymer was prepd. in aq. suspension, swollen in a vinyl monomer in the presence of a catalyst, dried, and active groups were incorporated to give beads of a **crosslinked** ion exchange resin. Thus, 98 parts of a styrene-ethylstyrene mixt., 2 parts divinylbenzene, and 0.25 part azobisisobutyronitrile (I) were dispersed in 200 parts H₂O contg. 10 parts NaCl and 2 parts Mg(OH)₂ at 65.degree.. The temp. was raised to 90.degree. over 8 hrs. with stirring and the polymer suspension was filtered to give 85.5% of polymer beads 0.2-0.6 mm. in diam. The polymer (10 g.) swelled to 56 ml. in excess PhMe. The polymer (85.5 parts) was mixed over 3 hrs. with a soln. of 0.2 part I in 85.5 parts styrene (II) and the mixt. was suspended in 120 parts H₂O at 70.degree.. The temp. was increased to 90.degree. with stirring over 8 hrs. and the resultant polymer filtered off and dried to give 98% of a product with a grain size of 0.55 mm., 10 g. of which swelled to 42.5 ml. in PhMe. Polymer beads with the same degree of **crosslinking**, 10 g. of which swelled to 43.3 ml. in PhMe, were prepd. by a conventional method which did not include the second stage swelling in II. Each polymer (100 parts) was immersed for 12 hrs. at 50.degree. in 450 parts monochlorodimethyl ether and 20 parts ZnCl₂. The product was dried and stirred for 8 hrs. at 50.degree. in 750 parts of a 10% aq. soln. of Me₃N to give an **anion** exchange resin. Similar treatment in H₂SO₄ gave a **cation** exchange resin. The capacity of the **anionic resin** swollen in II was 4.06 meq./g. compared with 3.9 meq./g. for the conventional

material and values for the **cationic resin** were 5.01 and 4.85 meq./g. resp. Using the **anionic resin** the exchange times for Cl-/SO42- were 54 and 73 sec. and on the **cationic resins**, for Na+/Ca2+, 135 and 195 sec. resp. Macroporous resins were prepd. in mixts. contg. aliphatic solvents b. 120-80.degree. and Bz2O2.

IC B01J; C08F

CC 37 (Plastics Fabrication and Uses)

IT **Anion** exchangers, preparation
(divinylbenzene-styrene **polymer quaternary ammonium** derivs., macroporous)

IT **Cation** exchangers, preparation
(**sulfonated** divinylbenzene-styrene **polymers**, macroporous)

L57 ANSWER 32 OF 37 HCA COPYRIGHT 2002 ACS

71:39957 Heterogeneous ion exchange membranes. Schwachula, Gerhard; Schmidt, Hans Ger. (East) DD 65237 19690120, 4 pp. (German). CODEN: GEXXA8. APPLICATION: DD 19671204.

AB The title products were prepd. by mixing ion exchange active powder with acetone-HCHO precondensate (I), transferring the mixt. to a support fabric, and completing the condensation in the presence of alc. NaOH soln. Thus, 70 parts of a powd. sulfonated polystyrene ion exchange material **crosslinked** with 8% divinylbenzene was mixed with 30 parts I precondensate in the presence of 25 parts alc. NaOH and transferred to a support fabric. The material was condensed 20 min. at 60.degree. to give a nonporous ionic exchange membrane with a capacity of 2.6 meq./g., penetration resistance of 5.3 ohm cm.2, and selectivity of 96.3%. Also used was an acrylic acid-based polymer.

IC B01J

CC 37 (Plastics Fabrication and Uses)

IT **Anion** exchangers, preparation
(membranes, from acetone-formaldehyde **polymers** and **quaternary ammonium** styrene **polymer** derivs.)

IT **Cation** exchangers, preparation
(membranes, from acetone-formaldehyde **polymers** and **sulfonated** styrene **copolymers**)

IT Acrylic acid, polymer with divinylbenzene
Benzene, divinyl-, polymer with acrylic acid
(**cation**-exchanging membranes from acetone-formaldehyde polymers and)

L57 ANSWER 33 OF 37 HCA COPYRIGHT 2002 ACS

71:13758 Catalytic haloalkylation of a **crosslinked** resin. Bufton, Richard G. (Diamond Alkali Co.). Fr. FR 1539768 19680920, 7 pp. (French). CODEN: FRXXAK. PRIORITY: US 19660720.

AB A process for haloalkylation of homopolymers and infusible **crosslinked** copolymers is described. Thus, to 0.27 mole ClCH2OMe, 0.40 mole TiCl4, AlCl3, ZnCl2, or SnCl4, and 400 ml. ligroine (b. 35-60.degree.) were added. After shaking, the mixt.

was cooled to 0.degree., 1 mole linear polystyrene added, the mixt. heated 16 hrs. at 35.degree., and the product sepd. and washed successively with water and MeOH. Percent swelling (an index of chloromethylation) at equil. was dependent on the catalyst used: 126, 91, 61, and 70% was obtained with the Ti, Al, Zn, and Sn chloride catalysts, resp. Chloromethylated polymers were also produced by using 0.1-5.0 moles of one of the catalysts (or FeCl₃)/mole of resin, temps. -25 to +60.degree., **crosslinked** vinyl aromatic polymers (formed from paraformaldehyde and linear polystyrene in the presence of MeOH, and ClSO₂OH) and copolymers contg. 60-99.9% styrene and 0.1-40% divinylbenzene. The use of C₄ haloalkyl ethers as haloalkylating agents was claimed. Ion-exchange resins with exchange indexes 3.59-4.70 meq./g. were prepd. by replacing the halogen atom of the haloalkyl radical with quarternary ammonium, sulfonium, carboxyl, or phosphonium groups.

IC C08F; B01J

CC 36 (Plastics Manufacture and Processing)

ST ion exchangers; chloromethylation polystyrene; polystyrene chloromethylation; formaldehyde **crosslinked** polystyrene

IT **Cation** exchangers, preparation
(chloromethylated styrene **polymers** for **carboxy** and phosphite)

IT **Anion** exchangers, preparation
(chloromethylated styrene **polymers** for **quaternary ammonium** and sulfonium)

L57 ANSWER 34 OF 37 HCA COPYRIGHT 2002 ACS

68:3536 Internally plasticized **cation**-exchange resins.
Aftergut, Siegfried (General Electric Co.). U.S. US 3350327
19671031, 3 pp. (English). CODEN: USXXAM. APPLICATION: US
19640326.

AB The title resin having increased flexibility and a lower shrinkage factor on dehydration are prepd. by reaction of an alkaryl polyether, PhO[(CH₂)_nO]_xPh, with concd. H₂SO₄, oleum, or chlorosulfonic acid, treating the sulfonated deriv. with an aldehyde-releasing compd. to polymerize and **crosslink** it, and curing for 1-2 hrs. at 85-95.degree.. The **cationic** ion-exchange **resins** and membranes are used as electrolytes in fuel cells, as membranes in electrodialysis cells, in the desalination of water, in purification of radioactive wastes, in desalination of sugar juices, preparative org. chemistry, and ion-exchange and purification processes. Thus, 1 mole 1,2-diphenoxyethane and 2 moles concd. H₂SO₄ were heated for 2 hrs. at 145.degree., 20 g. of the resulting 1,2-diphenoxyethanedisulfonic acid treated with 8 g. 37% HCHO, and the mixt. cast between 2 glass plates and heated for 2 hrs at 90.degree. to give a membrane having an ion-exchange capacity of 2.9 meq./dry g. and sp. resistivity of the fully hydrated membrane 7.5 ohm-cm. A resin having even greater flexibility was prepd. by using a monomer having a dimeric oxyethylene bridge between the terminal Ph groups, i.e. (PhOCH₂CH₂)₂O.

NCL 260002200
CC 36 (Plastics Manufacture and Processing)
ST **CATION** EXCHANGE RESINS PLASTICIZED; ACID; RESINS
CATION EXCHANGE PLASTICIZED; MEMBRANES ELECTRODIALYSIS
CELLS; FUEL CELL ELECTROLYTES; WATER DESALINATION MEMBRANES;
RADIOACTIVE WASTE PURIFN; ELECTRODIALYSIS CELLS MEMBRANES; SUGAR
JUICE DESALINATION; PLASTICIZED **CATION** EXCHANGE RESINS;
DESALINATION MEMBRANES; ALKARYL POLYETHERS VS SULFURIC
IT Membranes
(**cation**-exchanging, from **sulfonated** aralkyl
polyether **polymers** with formaldehyde)
IT **Cation** exchangers, preparation
(membranes, from **sulfonated** aralkyl polyether
polymers with formaldehyde)
IT Benzenesulfonic acid, (ethylenedioxy)di-, polymer with formaldehyde
Benzenesulfonic acid, [oxybis(ethyleneoxy)]di-, polymer with
formaldehyde
(as **cation**-exchanging membranes)

L57 ANSWER 35 OF 37 HCA COPYRIGHT 2002 ACS
64:94300 Original Reference No. 64:17812g-h Strong-base **anion**
-exchange resins from **polymeric** tertiary **amines**.
Feldt, Charles A.; Kekish, George T. (Nalco Chemical Co.). US
3234150 19660208, 5 pp. (Unavailable). APPLICATION: US 19600616.
AB Poly(N-vinylimidazole) (30 g.) is dissolved in 90 ml. H₂O, 29.5 g.
epichlorohydrin is added, and the soln. is heated to 85.degree.,
after which the reaction mixt. is cooled to room temp., washed,
ground, and dried at 90.degree.. The product has a total
ion-exchange capacity of 5.05 meq./g. and a
saltsplitting capacity of 3.48 meq./g.
IT 9002-98-6, Ethylenimine, homopolymer
(N-methylated, reaction products with 1-chloro-2,3-epoxypropane,
as **anion** exchangers)
RN 9002-98-6 HCA
CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 151-56-4
CMF C2 H5 N



NCL 260002100
CC 48 (Plastics Technology)
IT **Anion**-exchanging substances
(from epichlorohydrin reaction products with N-methylated
ethylenimine polymers or N-vinylimidazole polymers)
IT Acrylonitrile polymers (including copolymers), elec. charge

- prevention on
(reaction products of chloromethylated **cross-linked**, with amines, ion exchangers from)
- IT Imidazole, 1-vinyl-, homopolymer
(reaction products with epichlorohydrin or dichloroethylene, **anion**-exchanging)
- IT 79-10-7, Acrylic acid
(ester polymers with styrene, reaction products of chloromethylated **cross-linked**, with amines, ion exchangers from)
- IT 106-89-8, Propane, 1-chloro-2,3-epoxy-
(reaction products of, with N-methylated ethylenimine polymers or N-vinylimidazole polymers, as **anion** exchangers)
- IT 107-06-2, Ethane, 1,2-dichloro-
(reaction products with N-vinylimidazole polymers, as **anion** exchangers)
- IT 9003-53-6, Styrene polymers
(with acrylates or acrylonitrile and **sulfonated** styrene **polymers**, reaction products of chloromethylated **cross-linked**, with amines, ion exchangers from)
- IT 9002-98-6, Ethylenimine, homopolymer
(N-methylated, reaction products with 1-chloro-2,3-epoxypropane, as **anion** exchangers)

L57 ANSWER 36 OF 37 HCA COPYRIGHT 2002 ACS

56:73309 Original Reference No. 56:14169d-f Production of 2,2-bis(4-hydroxyphenyl)propane. (Union Carbide Corp.). GB 8803391 19611129 (Unavailable). PRIORITY: US 19581020.

AB The production of epoxy resins and polycarbonate resins requires as starting material the title compd. (I) of 96% or higher purity. This is achieved in a continuous process by treating phenol and acetone in the presence of insol. **cationic** exchange **resins**, contg. at least 2 **milliequivs.** acid/g. dry resin as catalyst. Such **resins** are: **sulfonated crosslinked** styrene **polymers**, phenol-formaldehyde-**sulfonic** acid **resins**. The catalytic effect is increased by esterifying 3-20% of the **cation** exchanging groups with a thio alc. Reaction temp. is between 40-100.degree., time of contact 1 hr., and the reaction by-products are recycled. Sulfonated **crosslinked** polystyrene (20% esterified (5 lb.) in a jacketed stainless steel column at 70-5.degree. is fed (% by weight) I 3.4, phenol (II) 83.4, acetone (III) 5.1, water (IV) 0.1, by-products (V) 8.0. The effluent is I 13.4, II 75.0, III 2.5, IV 1.0, V 8.1%. Conversion based on III consumed is 51%. The effluent is concd. at 140.degree./200 mm., cooled, centrifuged, and washed with phenol at 40.degree.. The mother liquid and washings are recycled. The centrifuge cake contains I-II adduct 88.3, II 11.1, V 0.6%. II is removed at 200.degree./1 mm. The final product contains I 98.8, II 0.3, and V 0.9%.

CC 29 (Noncondensed Aromatic Compounds)

IT Base-exchanging substances or **Cation**-exchanging substances

(catalysts, in acetone reaction with phenol)

L57 ANSWER 37 OF 37 HCA COPYRIGHT 2002 ACS

51:40723 Original Reference No. 51:7630a-c Effect of H^+/HCO_3^- ratio and selectivity on determination of soil productivity with ion exchangers. Tepe, W.; Leidenfrost, E. (Inst. Bodenk. Pflanzenernahr., Geisenheim, Germany). Z. Pflanzenernahr. Dung.-u. Bodenk., 75, 222-7 (Unavailable) 1956.

AB cf. C.A. 50, 12379f. The amts. of H^+ -satd. **sulfonic acid-type resin** (exchange capacity = 3.3 meq./g.) and HCO_3^- -satd. quaternary **amine-type resin** (exchange capacity = 1.1 meq./g.) in a dialysis bag were varied reciprocally (a total of 5 g. resin was kept). When the bag was left in contact with 100 ml. soil at satn. moisture content for 24 hrs., increasing amts. of **cations** (up to 1.2 meq.) were removed with increasing amts. of H^+ resin, multivalent **cations** being more affected than univalent ones. The most **anions** (0.1 meq.) were removed with 4 g. H^+ resin and 1 g. HCO_3^- resin. Since the system is not at equil., ionic diffusion rates have more effect on the ions removed than does the selectivity of the resins as affected by degree of **cross-linking** and exchanging groups.

CC 15 (Soils and Fertilizers)

=> d 158 1-26 ti

L58 ANSWER 1 OF 26 HCA COPYRIGHT 2002 ACS

TI Ink-jet printing **sheet** with polyurethane uppermost layer and its manufacture

L58 ANSWER 2 OF 26 HCA COPYRIGHT 2002 ACS

TI Method for manufacturing ink-jet printing material containing silica microparticle dispersion

L58 ANSWER 3 OF 26 HCA COPYRIGHT 2002 ACS

TI Ink jet printing paper capable of producing excellent printed matter

L58 ANSWER 4 OF 26 HCA COPYRIGHT 2002 ACS

TI Materials for image formation

L58 ANSWER 5 OF 26 HCA COPYRIGHT 2002 ACS

TI Porous printing materials with good dryability and water resistance

L58 ANSWER 6 OF 26 HCA COPYRIGHT 2002 ACS

TI Photocatalyst-containing **sheets** and their manufacture

L58 ANSWER 7 OF 26 HCA COPYRIGHT 2002 ACS

TI Thermally stable photographic bar code label containing antistatic layer

L58 ANSWER 8 OF 26 HCA COPYRIGHT 2002 ACS

- TI Multilayer coatings useful for vehicles
- L58 ANSWER 9 OF 26 HCA COPYRIGHT 2002 ACS
TI Preparation of ceramic-forming prepreg tape
- L58 ANSWER 10 OF 26 HCA COPYRIGHT 2002 ACS
TI Poly(.alpha.-methylstyrene) thermoplastic **binder** in ceramics manufacture
- L58 ANSWER 11 OF 26 HCA COPYRIGHT 2002 ACS
TI Ceramic **sheets**
- L58 ANSWER 12 OF 26 HCA COPYRIGHT 2002 ACS
TI Conductive electrophoretic coating compositions
- L58 ANSWER 13 OF 26 HCA COPYRIGHT 2002 ACS
TI Electrophotographic **sheet** for lithographic printing masters
- L58 ANSWER 14 OF 26 HCA COPYRIGHT 2002 ACS
TI **Binders** for water-thinned coatings
- L58 ANSWER 15 OF 26 HCA COPYRIGHT 2002 ACS
TI Flooring felt compositions
- L58 ANSWER 16 OF 26 HCA COPYRIGHT 2002 ACS
TI **Binders** for paper and nonwoven fabrics
- L58 ANSWER 17 OF 26 HCA COPYRIGHT 2002 ACS
TI Paper production
- L58 ANSWER 18 OF 26 HCA COPYRIGHT 2002 ACS
TI Cathodically depositable coating composition
- L58 ANSWER 19 OF 26 HCA COPYRIGHT 2002 ACS
TI Electroconductive resin compositions for electrophotographic materials
- L58 ANSWER 20 OF 26 HCA COPYRIGHT 2002 ACS
TI Electrophoretic coating under alternating current
- L58 ANSWER 21 OF 26 HCA COPYRIGHT 2002 ACS
TI Alternating current electrophoretic coating
- L58 ANSWER 22 OF 26 HCA COPYRIGHT 2002 ACS
TI Alternating current electrophoretic coating
- L58 ANSWER 23 OF 26 HCA COPYRIGHT 2002 ACS
TI Alternating current electrophoretic coating of metal with resins
- L58 ANSWER 24 OF 26 HCA COPYRIGHT 2002 ACS
TI **Anionic polymers** as electroconductors and their

comparison with **cationic polymers**, Pigment formulations

- L58 ANSWER 25 OF 26 HCA COPYRIGHT 2002 ACS
TI Photopolymerizable compositions for dry thermal image transfer
- L58 ANSWER 26 OF 26 HCA COPYRIGHT 2002 ACS
TI Bonding anionic cellulose fibers to anionic and nonionic materials by treating the fibers with a **cationic** altering **resin** containing an oxirane ring

=> d 158 3,4,7,13,14,16,26 cbib abs hitstr hitind

- L58 ANSWER 3 OF 26 HCA COPYRIGHT 2002 ACS
134:155278 Ink jet printing paper capable of producing excellent printed matter. Ishikawa, Takayuki; Kubota, Nobuhiro; Yoshimoto, Takeshi; Asai, Shigeki; Tsuchida, Minoru; Iwamoto, Kiyoshi; Onishi, Hiroyuki; Sugiyama, Atsushi (Tomoegawa Paper Co., Ltd., Japan; Seiko Epson Corp.). Jpn. Kokai Tokkyo Koho JP 2001039011 A2 20010213, 11 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-212742 19990727.
- AB The ink jet printing paper includes a glossiness adjustment layer contg. weak cationic or **anionic binder resins**. The ink receiving layer of the ink jet printing paper contains polymer **binders** comprised of (A) 100 emulsion polymer, (B) 10-75 water-sol. polymer selected from starch or cellulose deriv., and (C) 15-75 parts water-sol. polymer other than (B).
- IC ICM B41M005-00
ICS B41J002-01; D21H019-44; D21H027-00
- CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST ink jet printing paper glossiness adjustment layer; cationic **binder** anionic **binder** ink jet printing paper
- IT Ink-jet recording **sheets**
(paper; ink jet printing paper capable of producing excellent printed matter)
- IT 95145-35-0, Gohsenal T 350
(anionic **binder** in glossiness adjustment layer of ink jet printing paper)
- IT 9002-89-5D, Poly(vinyl alcohol), itaconic acid-modified
9003-20-7D, Poly(vinyl acetate), saponified. 24937-78-8, Panflex OM 5500 220425-13-8, PVA 420 245678-32-4, KL 318K 323196-00-5, Sorudain CP 13D
(**binder** in ink receiving layer of ink jet printing paper)
- IT 25154-86-3, N,N-Dimethylaminoethyl methacrylate **homopolymer**
(weak **cationic binder** in glossiness adjustment layer of ink jet printing paper)
- L58 ANSWER 4 OF 26 HCA COPYRIGHT 2002 ACS
132:42870 Materials for image formation. Mori, Kenichi; Kotani, Toru;

Suzuki, Toshitake; Sasaki, Yasushi (Toyobo Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 11348415 A2 19991221 Heisei, 13 pp.

(Japanese). CODEN: JKXXAF. APPLICATION: JP 1998-158927 19980608.

- AB The material comprises a support and an ink receptor layer thereon. The ink receptor layer contains an **anionic** water-absorbing **polymer**, a **cationic** water-absorbing **polymer**, and optionally a **binder**. The material may also have an anchor layer in between the support and the ink receptor layer. Clear images and writings can be formed on the materials with aq. inks, independent on their properties.
- IC ICM B41M005-00
ICS B32B027-00
- CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST ink receptor water absorbing polymer; **cationic** water absorbing **polymer** recording material; **anionic** water absorbing **polymer** recording material; aq ink printing paper
- IT Polysiloxanes, uses
(Paintad H; recording materials with ink receptor layers contg **anionic** water-absorbing **polymers** and **cationic** water-absorbing **polymers**)
- IT Aminoplasts
(Sumirez M 33W, anchor coating; recording materials with ink receptor layers contg **anionic** water-absorbing **polymers** and **cationic** water-absorbing **polymers**)
- IT Acrylic polymers, uses
Polyurethanes, uses
(anchor coating; recording materials with ink receptor layers contg **anionic** water-absorbing **polymers** and **cationic** water-absorbing **polymers**)
- IT Lithography
(offset, recording **sheets** for; recording materials with ink receptor layers contg **anionic** water-absorbing **polymers** and **cationic** water-absorbing **polymers**)
- IT Polymer blends
(poly(ethylene terephthalate)-polystyrene, support film; recording materials with ink receptor layers contg **anionic** water-absorbing **polymers** and **cationic** water-absorbing **polymers**)
- IT Films
(polyester, white support; recording materials with ink receptor layers contg **anionic** water-absorbing **polymers** and **cationic** water-absorbing **polymers**)
- IT Electrophotography
(recording **sheets** for; recording materials with ink receptor layers contg **anionic** water-absorbing **polymers** and **cationic** water-absorbing **polymers**)
- IT Recording materials

- (**sheets**; recording materials with ink receptor layers contg **anionic** water-absorbing **polymers** and **cationic** water-absorbing **polymers**)
- IT Polyesters, uses
(support films and anchor coatings; recording materials with ink receptor layers contg **anionic** water-absorbing **polymers** and **cationic** water-absorbing **polymers**)
- IT Polyesters, uses
(white support **sheets** from; recording materials with ink receptor layers contg **anionic** water-absorbing **polymers** and **cationic** water-absorbing **polymers**)
- IT 9003-08-1, Melamine resin
(Sumirez M 33W, anchor coating; recording materials with ink receptor layers contg **anionic** water-absorbing **polymers** and **cationic** water-absorbing **polymers**)
- IT 202345-43-5P, Elastron BN 11-Vylonal MD 16 copolymer
(anchor coating; recording materials with ink receptor layers contg **anionic** water-absorbing **polymers** and **cationic** water-absorbing **polymers**)
- IT 129428-51-9, Acryset 270E 153550-40-4, Vylonal MD 16
(anchor coating; recording materials with ink receptor layers contg **anionic** water-absorbing **polymers** and **cationic** water-absorbing **polymers**)
- IT 138184-81-3, Accogel A
(**anionic** water-absorbing **polymer**; recording materials with ink receptor layers contg **anionic** water-absorbing **polymers** and **cationic** water-absorbing **polymers**)
- IT 252574-50-8, Acrylic HU 596
(**binder** in ink receptor layer; recording materials with ink receptor layers contg **anionic** water-absorbing **polymers** and **cationic** water-absorbing **polymers**)
- IT 138184-82-4, Accogel C
(**cationic** water-absorbing **polymer**; recording materials with ink receptor layers contg **anionic** water-absorbing **polymers** and **cationic** water-absorbing **polymers**)
- IT 13463-67-7, TA 300, uses
(polyester support **sheets** contg.; recording materials with ink receptor layers contg **anionic** water-absorbing **polymers** and **cationic** water-absorbing **polymers**)
- IT 9003-53-6, T 575-57U
(white support **sheets** from; recording materials with ink receptor layers contg **anionic** water-absorbing **polymers** and **cationic** water-absorbing **polymers**)
- IT 25038-59-9, Poly(ethylene terephthalate), uses

(white support **sheets** from; recording materials with ink receptor layers contg **anionic** water-absorbing **polymers** and **cationic** water-absorbing **polymers**)

L58 ANSWER 7 OF 26 HCA COPYRIGHT 2002 ACS

128:108348 Thermally stable photographic bar code label containing antistatic layer. Anderson, Charles C.; Steinwachs, Lawrence J.; Schum, Gary W. (Eastman Kodak Co., USA). U.S. US 5700623 A 19971223, 8 pp. (English). CODEN: USXXAM. APPLICATION: US 1997-786512 19970121.

AB A bar code label comprises an opaque polymer film substrate having a first side and a second side. A first primer layer is superposed on the first side of the opaque polymer film substrate and a light-sensitive silver halide photog. emulsion layer is superposed on the first primer layer. The light-sensitive photog. emulsion contains silver halide grains, a hydrophilic colloid, a polymer latex, and a hardener. An overcoat layer is superposed on the light-sensitive photog. emulsion layer and includes a hydrophilic colloid and an image stabilizer. A second primer layer is superposed on the second side of the opaque polymer film and an antistatic layer is superposed on the second primer layer. The antistatic layer includes a polymeric **binder** and an antistatic agent. A pressure-sensitive adhesive layer is superposed on the antistatic layer and a removable release **sheet** is superposed on the pressure-sensitive adhesive layer.

IC ICM G03C001-805

NCL 430256000

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 9003-55-8D, Butadiene-styrene **copolymer**, **carboxylated** 9003-63-8, Poly(butyl methacrylate) 9010-76-8D, Acrylonitrile-vinylidene chloride **copolymer**, **cationic** 9017-80-5, Poly(vinylbenzyltrimethylammonium chloride) 25249-59-6, Acrylic acid-acrylonitrile-vinylidene chloride copolymer 54590-72-6, AQ55D 62744-35-8, Poly(sodium styrenesulfonate) 92481-24-8 131641-79-7, Witcobond 232 136820-91-2, Maleic acid-sodium styrenesulfonate copolymer (thermally stable photog. materials for bar code label prepn. with antistatic layers contg.)

L58 ANSWER 13 OF 26 HCA COPYRIGHT 2002 ACS

100:219061 Electrophotographic **sheet** for lithographic printing masters. (Ricoh Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 58020495 A2 19830205 Showa, 10 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1981-120270 19810731.

AB An electrophotog. **sheet** used in the prepn. of lithog. printing masters is obtained by coating a paper support with an undercoating, then with a water-repellent layer as needed, and coating the reverse side with photosensitive ZnO dispersed in resin followed by an electroconductive layer, the electroconductive layer being deposited with a mixt. obtained by mixing together a pigment

based on clay 70-95, CaCO₃ and(or) ZnO 5-30%, a **binder** based on a weakly **anionic** or nonionic **resin** emulsion, a **cationic polymer** electrolyte, and a wax emulsion.

IC B41N001-14; G03G005-14

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

L58 ANSWER 14 OF 26 HCA COPYRIGHT 2002 ACS

100:140902 **Binders** for water-thinned coatings. Gulbins, Erich; Kempter, Fritz Erdmann; Gimpel, Juergen (BASF A.-G., Fed. Rep. Ger.). Ger. Offen. DE 3225874 A1 19840112, 15 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1982-3225874 19820710.

AB The title **binders**, useful in cathodic electrocoat coating, contain acid-dispersible, N-contg. polymers and esters of polycarboxylic acids (mol. wt. <500). Thus, mixing 127 parts 59.1% soln. of a copolymer (amine no. 29.2, K-value 22.1, viscosity of 55% EtOAc soln. 2800 mPa-s) from Epikote 1001 allyl ether acrylate 8170, 2-ethylhexyl acrylate 2100, N-(vinylcarbamoyle)caprolactam 4000, and N-[3-(dimethylamino)propyl]methacrylamide 900 parts with AcOH 0.7, H₂O 500, TiO₂ 45, and trimethyl trimellitate (I) [2459-10-1] 5 parts and dilg. with H₂O to 1000 parts gave a **binder** dispersion. A cathodic, electrocoat coating from this compn. on Zn-phosphated **sheet** metal had pendulum hardness 170 s, Erichsen indentation 5.5 mm, 60.degree. gloss 50, surface (0 best, 5 worst) 1, throwing power 30%, and undercutting in corrosion testing (10 days) 16 mm, compared with 140, 4.0, 32, 2, 20, and 18, resp., without I.

IC C09D005-02; C09D007-12; C09D005-40; C25D013-04

CC 42-7 (Coatings, Inks, and Related Products)

ST **binder** coating electrophoretic; epoxy acrylate coating electrophoretic; methacrylamide aminopropyl copolymer coating; caprolactam vinylcarbamoyle copolymer coating; trimellitate ester coating electrophoretic; ester acid polybasic coating

IT Coating materials

(electrophoretic, **binders** for cathodic, nitrogenous **polymers** and **polycarboxylate** esters as)

IT 50-00-0D, polymers with acrylamide and coumarone-indene phenolic resins 79-06-1D, polymers with coumarone-indene phenolic resins and formaldehyde 80-05-7D, reaction products with phenolic resins, epoxy **resins** and **amines** 103-11-7D, polymers with epoxy resin allyl ether acrylates, (vinylcarbamoyle)caprolactam, and [dimethylamino]propyl]methacrylamide 111-42-2D, reaction products with phenolic resins and epoxy resins 111-92-2D, reaction products with phenolic resins and epoxy resins 5205-93-6D, polymers with epoxy resin allyl ether acrylates, ethylhexyl acrylate and (vinylcarbamoyle)caprolactam 25068-38-6D, reaction products with **amines** and phenolic **resins** 55818-57-0D, allyl ethers, polymers with ethylhexyl acrylate, (vinylcarbamoyle)caprolactam and [dimethylamino]propyl]methacrylamide 60451-35-6D, polymers with epoxy resin allyl ether acrylates, ethylhexyl acrylate and [dimethylamino]propyl]methacrylamide

- (**binders**, for cathodic electrocoatings)
IT 120-61-6 2459-10-1
(in **binders** for cathodic electrocoatings)
- L58 ANSWER 16 OF 26 HCA COPYRIGHT 2002 ACS
98:74131 **Binders** for paper and nonwoven fabrics. (Teijin Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 57139597 A2 19820828 Showa, 7 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1981-21378 19810218.
- AB An aq. **anionic polymer** soln. was mixed with an aq. **cationic polymer** soln. at a controlled ratio so that no coagulation occurred, and a pulp or fiber slurry was mixed with the above mixt. and formed into paper or nonwoven **sheets** with excellent strength, water resistance, and bulk. For example, 20 cm³ 1% aq. Gohsenal T 330 (I) [52410-51-2] [anionic poly(vinyl alc.) deriv.] mixed with 0.05, 0.50, or 0.90 cm³ 15% aq. Polyfix 105 (II) [84593-56-6] (epichlorohydrin-modified polyamidopolyamine) was clear. Unbleached kraft paper contg. 6.7% I and 0.25% II had dry (wet) strength 6.7 (0.7) kg/15 mm, compared with 6.7 (0) for a control not contg. II and 6.5 (0) for a control not contg. I or II.
- IC D21H003-36
CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)
Section cross-reference(s): 40
ST cationic polyamidopolyamine **binder** paper; anionic polyvinyl alc **binder** paper
IT Binding materials
(**anionic-cationic polymer** mixts.,
for paper and nonwoven fabric with improved wet strength)
- IT Paper
(manuf. of, with improved wet strength, anionic-cationic **binders** for)
- IT Polyester fibers, uses and miscellaneous
(nonwoven, with improved wet strength, anionic-cationic **binders** for)
- IT 106-89-8D, reaction products with polyamidopolyamines 52410-51-2 84593-56-6
(**binders** contg., for paper with improved wet strength)
- IT 37280-58-3 39387-98-9
(**binders** contg., for polyester nonwoven fabrics with improved bulkiness)
- L58 ANSWER 26 OF 26 HCA COPYRIGHT 2002 ACS
67:74670 Bonding anionic cellulose fibers to anionic and nonionic materials by treating the fibers with a **cationic** altering **resin** containing an oxirane ring. Williams, John Covington (Hawley Products Co.). U.S. US 3328234 19670627, 8 pp. (English). CODEN: USXXAM. APPLICATION: US 19650107.
- AB Cellulose fibers in aq. slurries are treated with a **cationic** hydrophilic altering **resin** which increases the affinity of the fibers for **anionic** and nonionic **resin binders**, and permits beater addn. of the resins. The altering resins are epoxidized precondensates of a polyamine and a

polyepoxide, or condensation products of the precondensates with HCHO. Thus, 20 g. tetraethylenepentamine and 20 g. Epon 828 (I) were mixed and heated to 130.degree.F., with the exotherm carrying to 250.degree.F. The mixt. was cooled to 160.degree.F., 10 g. I added, and heating continued to incipient gelation. To the resin, dissolved in 100 g. H2O and 20 g. 28% HCl to give pH 9, 10 g. formalin was added to give a HCHO condensation product (II). Southern kraft 15, ground wood 5, sulfite 3, and cotton linters 2 lb. were opened in a beater, and with roll brushing of the bed plate, were beaten until the Williams freeness was 120 sec. II (1%) was added to the beaten stock, and the mix was heated to 180.degree.F. with steam. The mix was cooled to 120.degree.F. and 5 lb. oleoresinous varnish contg. 50% solids (equal quantities of raw tung oil, rosin, and hard petroleum resin) in mineral spirits, was added to the fibers without difficulty. The stock felted without sticking, and, after curing 2 hrs. at 300.degree.F. and 2 days air drying, gave strong, H2O-repellent products. Other cellulosic fibers were similarly treated to receive polyester, polystyrene, PhOH-HCHO, and dicyclopentadiene resins.

NCL 162165000

CC 43 (Cellulose, Lignin, Paper, and Other Wood Products)

IT Waterproof materials

(from epoxy resins, phenol condensation products and polyesters, for paper **sheets**)

IT Paper pulp

(mixts. with epoxy resins, phenol condensation products or polyesters, water repellent **sheets** from)

IT 9004-34-6, uses and miscellaneous

(mixts. with epoxy resins, phenol condensation products or polyesters, water repellent **sheets** from)

=> d 159 1-16 ti

L59 ANSWER 1 OF 16 HCA COPYRIGHT 2002 ACS

TI Competitive adsorption of **cationic** polyacrylamides with different charge densities onto polystyrene latex, cellulose beads and cellulose fibers

L59 ANSWER 2 OF 16 HCA COPYRIGHT 2002 ACS

TI A study on sulfonation of oligo(p-phenylene sulfide) containing a disulfide bond as ion-exchanger

L59 ANSWER 3 OF 16 HCA COPYRIGHT 2002 ACS

TI Synthesis of poly(phenylene sulfide sulfonic acid) as thermostable ion exchanger

L59 ANSWER 4 OF 16 HCA COPYRIGHT 2002 ACS

TI Coagulants for removal of Microcystis from water and coagulation-sedimentation process

L59 ANSWER 5 OF 16 HCA COPYRIGHT 2002 ACS

- TI Sludge dewatering method
- L59 ANSWER 6 OF 16 HCA COPYRIGHT 2002 ACS
TI Amination of condensation polymers
- L59 ANSWER 7 OF 16 HCA COPYRIGHT 2002 ACS
TI Fixed bed ion exchanger and its use
- L59 ANSWER 8 OF 16 HCA COPYRIGHT 2002 ACS
TI Synthetic fibers with **cation**-exchange properties
- L59 ANSWER 9 OF 16 HCA COPYRIGHT 2002 ACS
TI Catalytic processes in chemical synthesis
- L59 ANSWER 10 OF 16 HCA COPYRIGHT 2002 ACS
TI Ion-exchange resins
- L59 ANSWER 11 OF 16 HCA COPYRIGHT 2002 ACS
TI Alkaline polymerization of 6-caprolactam. XXIII. End groups of polymers prepared by nonactivated alkaline polymerization of caprolactam
- L59 ANSWER 12 OF 16 HCA COPYRIGHT 2002 ACS
TI **Cation**-exchange resins
- L59 ANSWER 13 OF 16 HCA COPYRIGHT 2002 ACS
TI Stable "solutions" of humic acids
- L59 ANSWER 14 OF 16 HCA COPYRIGHT 2002 ACS
TI Decontamination of radioactive water
- L59 ANSWER 15 OF 16 HCA COPYRIGHT 2002 ACS
TI Use of ion exchange in some flotation and hydrometallurgical processes
- L59 ANSWER 16 OF 16 HCA COPYRIGHT 2002 ACS
TI Chemical transformations of insoluble styrene copolymers
- => d 159 7,8 cbib abs hitstr hitind
- L59 ANSWER 7 OF 16 HCA COPYRIGHT 2002 ACS
89:108626 Fixed bed ion exchanger and its use. Kwantes, Arien; Groeneveld, Hendrik Adriaan; Van Dongen, Arie (Shell Internationale Research Maatschappij B. V., Neth.). Ger. Offen. DE 2733537 19780202, 14 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1977-2733537 19770725.
- AB Bisphenols are continuously made from phenols and carbonyls, e.g., ketones or aldehydes, preferably Me₂CO, by reaction in a fixed bed of partly neutralized **cationic** exchange **resin**, e.g., **sulfonated** styrene/divinylbenzene or sulfonated phenol/formaldehyde, having both unmodified and mercaptoamine-

neutralized sulfonic acid groups uniformly distributed. A reactor is partly or completely filled with a bed of unneutralized resin, e.g., starting with the Na-salt form, then washing it with acidified water. Next, a soln. of a mercaptoamine, e.g., thioethanolamine or its salt is passed through to neutralize 2-25% of the sulfonic acid groups. Then, acidified water, e.g., 0.1-1 M HCl, is passed through the bed long enough to uniformly distribute the neutralized groups. Resin with an exchanger capacity of 2.6-5.2 milliequiv. H ion/g dry resin is used. The mol. ratio of phenol/carbonyl compd. is 3-50, preferably 10-30; temp. 30-120.degree., preferably 40-100.degree.; and flow is 0.1-20 L reactants/L catalyst/h downward through the bed.

IC C07C039-16

CC 25-10 (Noncondensed Aromatic Compounds)

IT **Cation** exchangers

(catalyst, for bisphenol prepn.)

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83:181018 Synthetic fibers with **cation**-exchange properties.

Miyamoto, Haruo; Miyamatsu, Tokuhisa; Sugimura, Kenji (Mitsubishi Rayon Co., Ltd., Japan). Japan. Kokai JP 50072886 19750616 Showa, 5 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1973-121632 19731031.

AB Impregnation of fibers with mixts. contg. styrene, divinylbenzene (I), and a polymn. catalyst (fibers are swellable but not sol. in the mixt. at temp. of polymn. of the mixt.) to cause ratio (r) of true wt. of fibers to product. of true fiber d. and apparent vol. of fibers .gtoreq.25%, heating the impregnated fibers for polymn. of the mixt. and rubbing the fibers followed by treatment with a sulfonating agent imparts **cation**-exchange properties to the fibers. Thus, a 480,000-denier 51:49 acrylonitrile-vinyl chloride copolymer [9003-00-3] tow was immersed in a mixt. contg. styrene 82, I 9, and Bz2O2 2 parts to 41 wt.% pickup. The impregnated tow was wound on a pipe (r 57%) and immersed in an aq. mixt. contg. 300 g/l. Na2SO4 for 2 hr at 103.degree.. The resulting tow was passed between 2 rubber rolls and immersed in an aq. mixt. of chlorosulfonic acid and CCl4 for 24 hr at 40.degree. to give fibers with neutral salt dissocn. efficiency 2.63 meq./g. Polypropene and poly(ethylene terephthalate) fibers and fuming H2SO4 sulfonating agent were also used.

IC B01J; C08F; D01F

CC 39-8 (Textiles)

ST **cation** exchanger synthetic fiber; polyester fiber **cation** exchanger; polypropene fiber **cation** exchanger; acrylic fiber **cation** exchanger; styrene copolymer **cation** exchanger

IT Vinyon fibers

(acrylonitrile-vinyl chloride, **cation** exchange-contg., prepd. in situ)

IT Acrylic fibers

Polyester fibers

(**sulfonated** divinylbenzene-styrene copolymer

- cation** exchanger-contg.)
- IT **Cation** exchangers
(**sulfonated** divinylbenzene-styrene **copolymer**,
synthetic fibers contg.)
- IT Benzene, diethenyl-, **polymer** with ethenylbenzene,
sulfonated
Benzene, ethenyl-, **polymer** with diethenylbenzene,
sulfonated
(**cationic** exchangers, synthetic fibers contg.)
- IT 9003-00-3
(fiber, contg. **sulfonated** divinylbenzene-styrene
copolymer cationic exchanger)